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Education Facilities, Playgrounds, *Recreational
Facilities, Swimming Pools

ABSTRACT

The references included were drawn from the documents received and processed to date by the ERIC Clearinghouse on Educational Facilities, and are organized into the following sections--(1) indoor physical education facilities, (2) outdoor physical education areas and facilities, (3) indoor and outdoor physical education areas and facilities, and (4) recreation areas and facilities. (Author)

ED035266

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EDUCATIONAL
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**AREAS AND FACILITIES FOR PHYSICAL EDUCATION
AND RECREATION**

An Interpretive Bibliography

**U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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AREAS AND FACILITIES FOR PHYSICAL EDUCATION AND RECREATION

An Interpretive Bibliography

Prepared By

Frank L. Smoll

Project Assistant

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ERIC Clearinghouse on Educational Facilities

The University of Wisconsin

Madison, Wisconsin

January, 1970

FOREWORD

The Educational Resources Information Center - Clearinghouse on Educational Facilities (ERIC/CEF) is a clearinghouse for information about sites, buildings, and equipment used for educational purposes. ERIC/CEF is part of a national network of 19 clearinghouses, each covering a different field of educational research. Information from all these clearinghouses is reported monthly in Research in Education (RIE), a publication of the U.S. Government Printing Office (annual subscription: domestic \$21.00, foreign \$26.25).

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In performing subject searches in RIE, researchers should correlate its use with the Thesaurus of ERIC Descriptors. Descriptors are technically meaningful terms or short phrases that are used to characterize a document and which may also be used as index entries. The descriptors used to generate this particular bibliography were: Athletic Fields; Field Houses; Gymnasiums; Locker Rooms; Physical Education Facilities; Playgrounds; Recreational Facilities; and Swimming Pools. All documents in the ERIC/CEF collection, which had been indexed using one or more of the aforementioned descriptors, were initial candidates for the bibliography. These documents were screened for applicability and quality and then organized into sections according to content.

The references contained herein do not represent an exhaustive compilation of publications on the subject. However, many of the documents are not widely circulated; and the bibliography serves to disseminate this information.

Howard E. Wakefield
Director

January, 1970

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AREAS AND FACILITIES FOR PHYSICAL EDUCATION AND RECREATION

	<u>Pages</u>
INDOOR PHYSICAL EDUCATION FACILITIES	1-47
<p>The first nine references deal with the planning and design of various types of indoor physical education facilities including gymnasiums, special activity facilities, swimming pools, locker and shower rooms, physical education offices, and equipment storage rooms (pages 2-10). The remainder of this section contains citations for publications specifically concerned with the planning, design, and operation of gymnasiums (11-24), field houses (25-31), swimming pools (32-43), and lockers (44-45), and the maintenance of gymnasiums and locker rooms (46-47).</p>	
OUTDOOR PHYSICAL EDUCATION AREAS AND FACILITIES	48-73
<p>Information regarding the planning, design, and construction of various types of outdoor physical education areas and facilities is included in the references presented on pages 49-59. The references on pages 60-65 treat topics related to playground areas and equipment. The use of asphalt surfaces and artificial turf for outdoor physical education areas are the topics of the references on pages 66-71 and 72-73 respectively.</p>	
INDOOR AND OUTDOOR PHYSICAL EDUCATION AREAS AND FACILITIES	74-86
<p>The planning, design, and construction of both indoor and outdoor physical education areas and facilities are dealt with in the first six references presented in this section (75-80). The latter six are primarily concerned with space guidelines and specifications for indoor and outdoor physical education areas and facilities (81-86).</p>	
RECREATION AREAS AND FACILITIES	87-95
<p>The references presented in this section are concerned with the planning and design of recreation areas and facilities including the use of school facilities for recreation purposes.</p>	

INDOOR PHYSICAL EDUCATION FACILITIES

PLANNING THE INDOOR PHYSICAL EDUCATION FACILITIES

**BY- HASE, GERALD J. AND HICK, BASIL L.
STATE UNIVERSITY OF NEW YORK, ALBANY**

PUBLISHED- 62

062 PAGES

**DESCRIPTORS - *ATHLETICS, *HYGIENE, *PHYSICAL EDUCATION, *SAFETY,
*SCHOOL DESIGN, DESIGN NEEDS, GYMNASIUMS, RECREATIONAL ACTIVITIES,
SANITATION, SPACE REQUIREMENTS, STATE STANDARDS**

**THIS PAMPHLET IS DESIGNED TO HELP ARCHITECTS AND LOCAL SCHOOL OFFICIALS
IN THE PREPARATION OF PLANS FOR PHYSICAL EDUCATION FACILITIES IN NEW AND
EXISTING BUILDINGS. FACILITIES MENTIONED INCLUDE--(1) GYMNASIUM, (2)
SWIMMING POOL, (3) SMALL GROUP ACTIVITY ROOM, (4) DRESSING AND SHOWERING
ROOMS, (5) TEAM ROOM, (6) EQUIPMENT DRYING ROOM, (7) LAUNDRY ROOM, (8)
CLASSROOM, (9) PHYSICAL EDUCATION OFFICES, AND (10) APPARATUS AND SUPPLY
STORAGE. SPECIAL MENTION IS MADE OF GYMNASIUM LOCATION, FLOOR SPACE AND
TREATMENT, AND A COMPARISON OF BOYS' AND GIRLS' DRESSING AND SHOWERING
ROOMS. OTHER CONSIDERATIONS INDICATED WERE--(1) TEACHING STATIONS, (2)
TOILETS, (3) BULLETIN BOARDS, AND (4) ELECTRICAL INSTALLATIONS. FLOORPLANS
ARE PROVIDED SHOWING THE LAYOUT FOR VARIOUS SPORTS. (MM)**

Order from EDRS as: ED 17146

MF \$0.25 HC \$0.88

A GUIDE FOR PLANNING INDOOR FACILITIES FOR COLLEGE PHYSICAL EDUCATION

BY - CRAWFORD, WAYNE H.

PUBLISHED - 1963

164 PAGES

DESCRIPTORS - *ARCHITECTURAL ELEMENTS; *COLLEGE PLANNING; *FACILITY GUIDELINES; *GYMNASIUMS; *PHYSICAL EDUCATION FACILITIES; BUILDING DESIGN; COLLEGE BUILDINGS; EDUCATIONAL PLANNING; LOCKER ROOMS; RECREATIONAL FACILITIES

FOLLOWING A GENERAL CONSIDERATION OF THE FUNCTIONAL ASPECTS OF PLANNING FACILITIES AND THE RELATIONSHIP BETWEEN PROGRAM AND FACILITIES, A DETAILED PRESENTATION IS MADE OF PLANNING BUILDINGS FOR COLLEGE AND UNIVERSITY INDOOR PHYSICAL EDUCATION ACTIVITIES. RECOMMENDATIONS ARE MADE WITH REGARD TO DESIGN, STRUCTURAL AND FUNCTIONAL FEATURES OF AUXILIARY GYMS, SPECIAL ACTIVITY AREAS, SOCIAL AND RECREATION FACILITIES, AND SERVICE FACILITIES. IN CONSIDERING FACILITIES COMMON TO ALL INDOOR AREAS (SURFACES, LIGHTING, ACOUSTICS, ETC.), ARGUMENTS PRO AND CON ARE PRESENTED PERTAINING TO COMMONLY USED MATERIALS AND THEIR APPLICATION. ALSO INCLUDED IS A CONSIDERATION OF USUAL ERRORS IN PLANNING AND CONSTRUCTION. (FS)

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MF \$0.75

HC \$8.00

SHELTER FOR PHYSICAL EDUCATION (A STUDY OF THE FEASIBILITY OF THE USE OF LIMITED SHELTERS FOR PHYSICAL EDUCATION)

BY- WAGNER, WILLIAM G. AND EVANS, BEN H. AND NOWAK, MATTHEW A. A AND M COLLEGE OF TEXAS, COLLEGE STATION, TEXAS, ARCHITECTURAL RESEARCH GROUP OF THE TEXAS ENGINEERING EXPERIMENT STATION

PUBLISHED- 61

066 PAGES

DESCRIPTORS- *GYMNASIUMS. *PHYSICAL EDUCATION. *PHYSICAL EDUCATION FACILITIES. * SCHOOL DESIGN. ATHLETICS. CLIMATE CONTROL. DESIGN. EXTRAMURAL ATHLETIC PROGRAMS. INTRAMURAL ATHLETIC PROGRAMS. OUTDOOR EDUCATION. PHYSICAL RECREATION PROGRAMS. THERMAL ENVIRONMENT

A REPORT IS PRESENTED REGARDING VARIOUS DESIGN, STRUCTURAL AND FUNCTIONAL FEATURES OF LIMITED SHELTERS FOR PHYSICAL EDUCATION AT THE PRIMARY AND SECONDARY SCHOOL LEVELS. LIMITED SHELTER REFERS TO THE USE OF NATURAL OR MANMADE DEVICES TO PROTECT THE HUMAN BEING FROM THE EXTREMES OF THE NATURAL ELEMENTS. IT IS A FACILITY THAT NOT ONLY AFFORDS PROTECTION FROM CLIMATIC EXTREMES, BUT ALSO CAPTURES AND UTILIZES THE DESIRABLE ELEMENTS OF OUR NATURAL ENVIRONMENT AND CREATES A STIMULATING BACKDROP FOR PHYSICAL EDUCATION ACTIVITIES. (FS)

Availability:

**Publication Department
Texas Engineering Experiment Station
A. & M. College of Texas
College Station, Texas 77840**

SECONDARY SCHOOL DESIGN: PHYSICAL EDUCATION

DEPARTMENT OF EDUCATION AND SCIENCE, LONDON, ENGLAND

PUBLISHED - 1965

IN - BUILDING BULL - 26

033 PAGES

DESCRIPTORS - *BUILDING DESIGN; *FACILITY GUIDELINES; *GYMNASIUMS; *PHYSICAL EDUCATION FACILITIES; *SWIMMING POOLS; FACILITY REQUIREMENTS; PHYSICAL FACILITIES; SCHOOL BUILDINGS; SCHOOL DESIGN

CURRENT TRENDS IN PHYSICAL EDUCATION IN SECONDARY SCHOOLS IN ENGLAND ARE ANALYSED IN RELATION TO THE DESIGN OF INDOOR PHYSICAL EDUCATION FACILITIES. SPACES NEEDED FOR THE STUDY OF MOVEMENT IN DANCE AND MODERN GYMNASTICS ARE OUTLINED; AND THE INDOOR PROVISIONS NECESSARY FOR GAMES, ATHLETICS, CONTESTS, SWIMMING ARE DISCUSSED, WITH COMMENTS ON THE DIMENSIONS, WALL AND FLOOR FINISHES, LIGHTING AND HEATING REQUIRED. THE BALANCE OF ACCOMMODATION IS CONSIDERED WITH SPECIAL ATTENTION TO JOINT USE BY THE SCHOOL AND THE COMMUNITY. DIAGRAMMATIC ILLUSTRATIONS SUPPLEMENT THE DISCUSSION THROUGHOUT. (FS)

Availability:

Will be reported in RIE, 1970

**British Information Services
845 Third Avenue
New York, New York 10022 (\$0.66)**

SCHOOL DESIGN**BY- ERWIN, CLYDE A.****NORTH CAROLINA STATE BOARD OF EDUCATION, RALEIGH, DEPARTMENT OF
PUBLIC INSTRUCTION****PUBLISHED-AUG52****053 PAGES**

**DESCRIPTORS- *CLASSROOM DESIGN, *FACILITY GUIDELINES, *SCHOOL
DESIGN, *SCHOOL PLANNING, *SITE DEVELOPMENT, BUILDING DESIGN,
DINING FACILITIES, LIBRARIES, PHYSICAL EDUCATION FACILITIES,
SCHOOL ACTIVITIES, SCIENCE LABORATORIES, SITE ANALYSIS, SPACE
UTILIZATION**

**THIS GUIDE TO BASIC PRINCIPLES OF SCHOOL DESIGN PRESENTS
DIAGRAMMATIC EXPLANATION OF VARIOUS DEVELOPED STANDARDS AND
PLANNING SUGGESTIONS. THE FIRST SECTION SCHEMATICALLY DEVELOPS
PATTERNS OF SCHOOL ACTIVITY FOR PRIMARY, ELEMENTARY, AND HIGH
SCHOOLS. THE SECOND DISCUSSES ORGANIZATION OF ACTIVITIES ON--(1)
COUNTRY ADJUSTMENT, (2) LANDSCAPING, (3) OUTDOOR LANDSCAPE
LABORATORIES, (4) BUILDING COMPLEX EXPANSION, AND (5) SITE
IMPROVEMENT. THE LAST SECTION COVERS BUILDING DESIGN DATA IN
TERMS OF ARCHITECTURAL CRITERIA SUCH AS ARTICULATION, AS WELL AS
DEVELOPING SPECIFICATIONS FOR--(1) PRIMARY, ELEMENTARY, AND HIGH
SCHOOL CLASSROOMS, (2) ADMINISTRATION, (3) LIBRARIES, (4) SCIENCE
ROOMS, (5) HOME ECONOMICS, (6) AGRICULTURAL SHOP, (7) LUNCH ROOM,
AND (8) PHYSICAL EDUCATION FACILITIES. (MH)**

Availability:

**North Carolina Dept. of Public Instr.
Division of School Planning
Raleigh, North Carolina 27602**

BOWLING FACILITIES IN SECONDARY SCHOOLS

**BRUNSWICK CORPORATION, ENGLEWOOD CLIFFS, NEW JERSEY, MARKETING
RESEARCH DEPARTMENT**

PUBLISHED- 65

158 PAGES

**DESCRIPTORS- *RECREATIONAL ACTIVITIES, *RECREATIONAL FACILITIES,
*PHYSICAL EDUCATION, *COMMUNITY RECREATION PROGRAMS, RECREATION,
SECONDARY EDUCATION, EXTRAMURAL ATHLETIC PROGRAMS, INTRAMURAL
ATHLETIC PROGRAMS**

**THIS REPORT DELINEATES THE CURRENT STATUS OF BOWLING AT THE
SECONDARY SCHOOL LEVEL AND IDENTIFIES THE PERTINENT CONSIDERATIONS
EXERCISING AN INFLUENCE UPON THE FUTURE INSTALLATION OF ON-CAMPUS
LANES. FOLLOWING A CONSIDERATION OF BOWLING AS A CARRYOVER SPORT,
INFORMATION IS PRESENTED REGARDING THE NATURE AND CONDITION OF
EXISTING BOWLING FACILITIES IN EDUCATIONAL INSTITUTIONS. FACTORS
PERTAINING TO INSTALLATION OF ON-CAMPUS LANES ARE ANALYZED. (FS)**

Availability:

**Brunswick Corporation
Bowling Division
Marketing Research Department
Englewood Cliffs, New Jersey 07632**

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02. STARKEY W.F.

BY- 09 AND AMER ASSN OF JUNIOR COLLEGES, 1777 MASS AVE. N.W.,
WASHINGTON, D.C. 20036

003 PAGES

DESCRIPTORS - *BUILDING DESIGN, *PHYSICAL EDUCATION FACILITIES, *THEATERS,
GYMNASIUMS, SWIMMING POOLS

DESIGN, STRUCTURAL, AND FUNCTIONAL FEATURES ARE DESCRIBED FOR MONTI-
CELLO JUNIOR COLLEGE'S THEATRON -- A BUILDING THAT INCLUDES A THEATER AND
PHYSICAL EDUCATION FACILITIES (SWIMMING POOL AND GYMNASIUM). (FS)

Availability:

American Association of Junior Colleges
1777 Massachusetts, N.W.
Washington, D.C. 20036

**WHAT WENT WRONG. MAINTENANCE AND OPERATION ERRORS TO AVOID IN
EDUCATIONAL FACILITY PLANNING****COUNCIL OF EDUCATIONAL FACILITY PLANNERS, COLUMBUS, OHIO****PUBLISHED-JUL68****247 PAGES**

**DESCRIPTORS- *FACILITY GUIDELINES, *PHYSICAL DESIGN NEEDS,
*SCHOOL ENVIRONMENT, *SCHOOL MAINTENANCE, *SCHOOL PLANNING,
CLASSROOMS, ENVIRONMENTAL INFLUENCES, EQUIPMENT, FOOD HANDLING
FACILITIES, HEALTH FACILITIES, HOUSING, INSTRUCTIONAL MATERIALS
CENTERS, LABORATORIES, PHYSICAL EDUCATION FACILITIES, SITE
DEVELOPMENT, SPATIAL RELATIONSHIP, THEATERS, TRAFFIC PATTERNS,
UTILITIES**

**AREA-BY-AREA DISCUSSIONS OF THE COMPONENTS OF NEW
EDUCATIONAL BUILDINGS AND THE PROBLEMS THAT CAN OCCUR ONCE A
BUILDING IS IN USE ARE PRESENTED. METHODS TO BE USED IN AVOIDING
FUTURE MAINTENANCE AND OPERATION TROUBLES ARE ALSO INCLUDED.
EMPHASIZED THROUGHOUT IS THE RESPONSIBILITY OF THE EDUCATIONAL
FACILITY PLANNER TO LEARN AS MUCH AS HE CAN ABOUT THE BUILDING HE
CONTROLS. PLANT PLANNING SHOULD NOT BE CARRIED ON WITH
PRECONCEIVED NOTIONS OR LACK OF INFORMATION. (RK)**

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MF \$1.00

HC \$12.45

BUILDING MATERIALS STANDARDS WHICH REFLECT LONG-TERM MAINTENANCE AND OPERATIONS SAVINGS

**BY- CORWIN, RALPH G.
ASSOCIATION OF SCHOOL BUSINESS OFFICIALS, EVANSTON, ILLINOIS**

PUBLISHED-OCT62

IN- PROCEEDINGS, ASSOCIATION OF SCHOOL BUSINESS OFFICIALS OF THE UNITED STATES AND CANADA, 48TH ANNUAL MEETING AND EDUCATIONAL EXHIBIT, DALLAS, TEXAS, OCTOBER 15-19, 1962

008 PAGES

DESCRIPTORS- *BUILDING MAINTENANCE, *BUILDING MATERIALS, *DESIGN NEEDS, *OPERATING EXPENSES, *SCHOOL DESIGN, ATHLETIC EQUIPMENT, BUILDING EQUIPMENT, BUILDING OPERATION, FLOORING, HEALTH, PAINTING, ROOFING, SAFETY, SCHOOL CONSTRUCTION, STRUCTURAL BUILDING SYSTEMS

BUILDING MATERIALS USED IN SCHOOL CONSTRUCTION ARE AN IMPORTANT FACTOR IN DETERMINING INITIAL AND OPERATING COSTS OF THE BUILDING. THIS PRESENTATION PROVIDES A SERIES OF EXAMPLES OF MATERIAL AND EQUIPMENT APPLICATIONS IN SCHOOL DESIGN, AND INDICATES COST SAVINGS IN MAINTENANCE AND BUILDING PERFORMANCE. EXAMPLES INCLUDE AREAS SUCH AS--(1) DOOR AND WINDOW FRAMING, (2) ROOFING AND FLOORING, (3) FENCING AND LANDSCAPING, (4) TOILETS AND LOCKER ROOMS, (5) STAIRS, CORRIDORS, AND SIGNS, (6) ATHLETIC FACILITIES. IN COMPARISON WITH CODES AND STATE STANDARDS, THIS ARTICLE PROVIDES SUGGESTIONS FOR SPECIFIC MATERIALS AND ITEMS OF EQUIPMENT AND EXPLAINS THE DESIGN JUSTIFICATION.

Availability:

**Assn. of School Business Officials
1010 Church Street
Evanston, Illinois 60201**

DEVELOPMENT OF A GLASS GYMNASIUM

**BY- CAUDILL, WILLIAM W.
CAUDILL, ROWLETT, SCOTT AND ASSOCIATES ARCHITECTS-ENGINEERS
BRYAN, TEXAS**

**PUBLISHED- 57
IN- RESEARCH REPORT, 10**

009 PAGES

**DESCRIPTORS- *ARCHITECTURE, *DESIGN, *PHYSICAL EDUCATION,
*PLAYGROUNDS, CLIMATE CONTROL, BUILDING DESIGN, SCHOOL
ARCHITECTURE**

**THIS REPORT DISCUSSES THE GENERAL PLANNING AND DEVELOPMENT
OF THE GLASS-ENCLOSED GYMNASIUM OF THE MOORE JUNIOR HIGH SCHOOL
IN TYLER, TEXAS. THE GYMNASIUM IS TO BE USED AS A FUNCTIONAL
INSIDE PLAY AREA. THE CHARACTERISTICS OF THE BUILDING ARE--NO
BUCKS OR MASONRY WALLS, SLOPING ROOF TO KEEP THE SUN OFF THE
WALLS, SEPARATE VENTILATING DUCTS FOR THE GYMNASIUM FLOOR AND
DRESSING ROOMS, OVERHEAD PLASTIC SKYLIGHTS, AND GLASS WALLS TO
PROVIDE HIGH LEVEL NATURAL ILLUMINATION.**

Availability:

**Caudill, Rowlett and Scott Architects
3636 Richmond Avenue P.O. Box 22427
Houston, Texas 77026**

TILT-UP MEN'S GYMNASIUM SUITS SPORTS AND SPECTATORS

BY - MORROW, JOHN

PUBLISHED - AUGUST 1967

IN - AMERICAN SCHOOL AND UNIVERSITY; V39 N12 P29, 46 AUGUST 1967

002 PAGES

DESCRIPTORS - *ARCHITECTURAL ELEMENTS; *BUILDING DESIGN; *FACILITY CASE STUDIES; *GYMNASIUS; *PHYSICAL EDUCATION FACILITIES; ARCHITECTURAL CHARACTER; COMPONENT BUILDING SYSTEMS; DESIGN PREFERENCES ; LOCKER ROOMS

DESIGN, STRUCTURAL, AND FUNCTIONAL FEATURES ARE DESCRIBED FOR THE MEN'S GYMNASIUM AT EL CAMINO COLLEGE, CALIFORNIA. EMPHASIS IS GIVEN TO THE TILT-UP PANELS COMBINED WITH FACE BRICK AND PORCELAIN ENAMEL FASCIA TO FORM THE UNIT'S EXTERIOR. DESCRIPTIONS ARE INCLUDED OF AREAS INTENDED FOR PHYSICAL EDUCATION ACTIVITIES AND FOR SPORTS EVENTS, THE STORAGE AND EQUIPMENT ISSUE ROOM FOR ATHLETIC TEAMS, AND THE LOCKER ROOM FACILITIES. CONSIDERATION IS ALSO GIVEN TO FACILITIES FOR SPECTATORS AT ATHLETIC EVENTS. PHOTOGRAPHS OF THE GYMNASIUM ARE INCLUDED. (FS)

Availability

**Buttenheim Publishing Corporation
757 Third Avenue
New York, New York 10017**

HOW TO BUILD SIX GYMS -- ON BUDGET

BY- MC GOWAN, W. C.
AMERICAN SCHOOL BOARD JOURNAL

PUBLISHED-MAY66

003 PAGES

DESCRIPTORS- *ATHLETIC FACILITIES, *GYMNASIUMS, *PHYSICAL
EDUCATION FACILITIES, EDUCATIONAL FACILITIES, RECREATIONAL
FACILITIES, PHYSICAL FACILITIES

SIX GYMNASIUMS WERE BUILT WITH ONE PLAN AND ONE CONTRACTOR
AT A COST WHICH WAS BELOW THE NATIONAL AVERAGE ON SCHOOL
GYMNASIUM CONSTRUCTION. A BASKETBALL COURT WITH SEATING FOR 1000
SPECTATORS WAS PROVIDED IN EACH. LOCKER ROOMS, SHOWERS, OFFICES,
AND MECHANICAL, STORAGE, BAND, AND CHORAL PRACTICE ROOMS WERE
INCLUDED. LOW COST DRAW CURTAINS SEPARATED BOYS' CLASSES FROM THE
GIRLS' CLASSES. INTERIOR WALLS WERE PAINTED WITH EPOXY EXCEPT
SHOWER ROOMS WHICH WERE GLAZED TILE. HEAVY DUTY ROOFING WAS
INSTALLED. EACH GYM COST \$250,000 AND 20,640 SQUARE FEET WERE
CONSTRUCTED IN EACH.

Availability:

American School Board Journal
1233 Central Street
Evanston, Illinois 60201

DESIGNED FOR PARTICIPATION

BY- BISCHUFF DAVID C.

PUBLISHED-MAR66

AVAILABLE FROM- JOHNER, AAHPER, 1201 SIXTEENTH ST., N.W.,
WASHINGTON 6, D.C. 20036

OC4 PAGES

DESCRIPTORS- *GYMNASIUMS, *SCHOOL ARCHITECTURE, *SCHOOL DESIGN,
*STATE UNIVERSITIES, ACOUSTICAL ENVIRONMENT, DESIGN NEEDS,
FLEXIBLE FACILITIES

THE BAYDEN GYM AT THE UNIVERSITY OF MASSACHUSETTS WAS
DESIGNED FOR INSTRUCTION AND RECREATION FOR 2,500 MALE STUDENTS.
IT HAS FOUR FLOORS, EACH OF WHICH IS OVER AN ACRE IN SIZE.
STAIRWELLS ARE LOCATED ON THE OUTSIDE OF THE BUILDING, THEREBY
REDUCING EXCESS NOISE. THE MAIN FLOOR IS FLEXIBLY PLANNED. THE
BASEMENT HAS MULTIPLE USES. THE FIRST FLOOR IS PRIMARILY A LOCKER
AREA, AND THE SECOND FLOOR HAS OFFICES AND CLASSROOMS.
FLUORESCENT LIGHTING AND TRANSLUCENT WINDOWS ARE USED. A TUNNEL
PROVIDES PEDESTRIAN ACCESS TO THE BUILDING.(LD)

Availability:

AAHPER
1201 Sixteenth Street, N.W.
Washington, D.C. 20036

THREE-UNIT COMPLEX COMBINES GEOMETRICS, ATHLETICS, ESTHETICS

PUBLISHED-APR68

IN- COLLEGE AND UNIVERSITY BUSINESS, VOL. 44, NO. 4, APRIL 1968

2 PAGES

DESCRIPTORS- *AUDITORIUMS, *GYMNASIUMS, *PHYSICAL EDUCATION FACILITIES, ARCHITECTURAL CHARACTER, BUILDING DESIGN, CAMPUS PLANNING

DESCRIPTION OF AN AUDITORIUM-GYMNASIUM BUILDING COMPLEX AT COLORADO STATE UNIVERSITY. THE STRONG BUILDING FORM RESULTS FROM ESTABLISHMENT OF CAMPUS INTEGRATION AND EXPRESSION OF IMPORTANT FUNCTIONAL AND STRUCTURAL ELEMENTS. USAGE OF STRONGLY EXPRESSED STRUCTURAL STEEL, JUXTAPOSITION OF FORM ELEMENTS, AND IMAGINATIVE CIRCULATORY PROGRAMMING CONTRIBUTE TO THE UNIQUE DESIGN CONCEPT. A FLOOR PLAN, EXTERIOR PHOTOGRAPH, AND CONSTRUCTION DATA ACCOMPANY THE TEXT. (MH)

Availability:

**McGraw-Hill
1050 Merchandise Mart
Chicago, Illinois 60654**

ARMCO BUILDING SYSTEMS FOR SCHOOL FACILITIES

ARMCO BUILDING SYSTEMS, MIDDLETOWN, OHIO

IN- ARMCO STEEL CORPORATION, MIDDLETOWN, OHIO

022 PAGES

DESCRIPTORS- *FACILITIES, *SCHOOL DESIGN, *COMPONENT BUILDING SYSTEMS, SCHOOLS, MOBILE CLASSROOMS, AUDITORIUMS, GYMNASIUMS

THIS BROCHURE DESCRIBES VARIOUS DESIGN AND STRUCTURAL FEATURES OF ARMCO BUILDING SYSTEM'S PRE-ENGINEERED STRUCTURAL COMPONENTS (INTERLOCKING RIBBED STEEL WALL PANELS AND ALUMINIZED STEEL ROOFS). EMPHASIS IS GIVEN TO THE USE OF THE COMPONENTS IN GYMNASIUM CONSTRUCTION. (FS)

Availability:

**Armco Steel Corporation
Metal Products Division
Middletown, Ohio 45042**

PREVIEW OF A NEW STUDY (EFL TAKES A LOOK AT AUDITORIUMS)

**BY- GRAVES, BEN E.
RESEARCH COUNCIL OF THE GREAT CITIES PROGRAM FOR SCHOOL
IMPROVEMENT, CHICAGO, ILLINOIS**

**PUBLISHED-AUG66
IN- NEW LIFE FOR OLD SCHOOLS NEWSLETTER NO. 10**

4 PAGES

**DESCRIPTORS- *AUDITORIUMS, *GYMNASIUMS, *HIGH SCHOOLS, *SCHOOL
IMPROVEMENT, SCHOOL DESIGN, SCHOOL EXPANSION**

**ST. LOUIS' ROOSEVELT HIGH SCHOOL IS THE SUBJECT OF THIS
NEWSLETTER REPORT. THIS 42-YEAR OLD AUDITORIUM AND GYMNASIUM WAS
REMODELED TO FACILITATE THE NEEDS OF ITS CURRENT STUDENT
ENROLLMENT AND FACULTY. ITS 2,100 SEAT AUDITORIUM WAS NOT
SUFFICIENT TO HOLD THE 3,000 MEMBER STUDENT BODY. CONVERSELY, IT
WAS MUCH TOO LARGE FOR ANY EFFECTIVE TEACHING PURPOSES. THE
HALL'S MAIN FLOOR SEATS 1,460, BUT ITS GENERAL STAGE WAS SELDOM
USED AND DOUBLED AS A PHYSICAL EDUCATION SPACE. THE 644 SEAT
BALCONY WAS VIRTUALLY DORMANT. A MORE EFFICIENT AUDITORIUM,
ADDITIONAL CLASSROOM SPACE, LARGE GROUP LECTURE ROOMS, A LITTLE
THEATER, AND A GYMNASIUM WERE ALL BADLY NEEDED. A CAREFUL
ANALYSIS BY ARCHITECTS PRODUCED A BOLD PROPOSAL THAT FULFILLED
ALL REQUIREMENTS. THE STUDENT CAPACITY WAS INCREASED BY 480
PLACES, AND THE SLIGHTLY USED AUDITORIUM WAS DIVIDED INTO A
HIGHLY ACTIVE GROUP OF SPACES WHILE THE ORIGINAL DIGNITY OF THE
BUILDING WAS RETAINED. (RH)**

Availability:

**Educational Facilities Laboratories
477 Madison Avenue
New York, N. Y. 10022**

THE REMODELING OF CENTRAL JUNIOR HIGH SCHOOL**BY- CONSTIEN, GEORGE R.****ASSOCIATION OF SCHOOL BUSINESS OFFICIALS, CHICAGO, ILLINOIS****PUBLISHED- 65****IN- PROCEEDINGS, ASSOCIATION OF SCHOOL BUSINESS OFFICIALS OF THE UNITED STATES AND CANADA, 50TH ANNUAL MEETING AND EDUCATIONAL EXHIBIT, SAN FRANCISCO, CALIFORNIA, OCTOBER 17-22, 1964****006 PAGES****DESCRIPTORS- *BUILDING IMPROVEMENT, *BUILDING MATERIALS, *CONSTRUCTION PROGRAMS, *JUNIOR HIGH SCHOOLS, *SCHOOL CONSTRUCTION, AUDITORIUMS, CONSTRUCTION COSTS, CONTROLLED ENVIRONMENT, GYMNASIUMS**

THE PRESENT STATE OF DEPRECIATION IS DESCRIBED FOR A HIGH SCHOOL BUILDING AND A DETAILED OUTLINE IS GIVEN FOR A PROGRAM OF REMODELING AND RENNOVATION TO CONVERT THE BUILDING FOR USE AS A JUNIOR HIGH SCHOOL. THE OUTLINE INCLUDES THREE MAJOR SECTIONS--(1) ENGINEERING AND CONSULTANT SERVICES, (2) CONSTRUCTION HISTORY, AND (3) REMODELING DETAILS. THE DETAILS INCLUDE THE SCOPE OF THE WORK AND CONTRACTORS FOR--(1) OUTSIDE DOORS, (2) GYMNASIUM FLOOR, (3) HEATING AND VENTILATING, (4) ROOF AND SKYLIGHTS, (5) PLUMBING, (6) ELECTRICITY, (7) PAINTING, (8) AUDITORIUM AND (9) SITE DEVELOPMENT. ADDITIONAL INFORMATION IS PROVIDED ON BUILDING MATERIALS, CONSTRUCTION COSTS, AND A BRIEF EVALUATION OF THE WORK DONE. (MM)

Availability:

**Assn. of School Business Officials
1010 Church Street
Evanston, Illinois 60201**

MINIMUM AREAS FOR SECONDARY SCHOOL BUILDING FACILITIES

**PENNSYLVANIA STATE DEPARTMENT OF PUBLIC INSTRUCTION, HARRISBURG,
BUREAU OF BUILDING CONSTRUCTION, HARRISBURG**

PUBLISHED- 66

005 PAGES

**DESCRIPTORS- *AUDITORIUMS, *CLASSROOMS, *DINING FACILITIES,
*FACILITY UTILIZATION RESEARCH, *INTERIOR SPACE, LIBRARIES,
PLANNING, SCHOOL SPACE, GYMNASIUMS, INSTRUCTIONAL MATERIALS
CENTER, LOCKER ROOMS, SPATIAL RELATIONSHIP, SCHOOL PLANNING**

**RECOMMENDED SPACE REQUIREMENTS ARE PRESENTED FOR EDUCATIONAL
FACILITIES. GYMNASIUMS ARE AMONG THE SCHOOL AREAS CONSIDERED. (FS)**

Availability:

**Pennsylvania State Department of Public Instruction
Bureau of Building Construction
Harrisburg, Pennsylvania 17126**

STANDARD SCHOOL PLAN D-2

NEW YORK STATE EDUCATION DEPARTMENT, ALBANY, DIVISION OF SCHOOL BUILDINGS AND GROUNDS

010 PAGES

DESCRIPTORS- *EDUCATIONAL FACILITIES, *HIGH SCHOOLS, *JUNIOR HIGH SCHOOLS, *SCHOOL DESIGN, *SCHOOL PLANNING, AUDITORIUMS, CLASSROOMS, FALLOUT SHELTERS, LIBRARIES, SCHOOL CONSTRUCTION, GYMNASIUMS

THIS BROCHURE CONTAINS THE EDUCATIONAL FACILITIES DESIGNED FOR A TYPE D-2 JUNIOR-SENIOR HIGH SCHOOL (GRADES 7-12; CAPACITY 1,000 STUDENTS; EXPANDABLE TO 1,200 STUDENTS). A SKETCH OF THE FLOOR PLAN IS PRESENTED, AND SPECIFICATIONS ARE OUTLINED. PROVISIONS FOR A GYMNASIUM ARE INCLUDED. (FS)

Availability:

**Division of School Buildings and Grounds
State Education Department, State of New York
Albany, New York 12224**

STANDARD SCHOOL PLAN D-3

NEW YORK STATE EDUCATION DEPARTMENT, ALBANY, DIVISION OF SCHOOL BUILDINGS AND GROUNDS

010 PAGES

DESCRIPTORS- *JUNIOR HIGH SCHOOLS, *HIGH SCHOOLS, *SCHOOL DESIGN, *SCHOOL PLANNING, *SENIOR HIGH SCHOOLS, AUDITORIUMS, CLASSROOMS, EDUCATIONAL FACILITIES, FALLOUT SHELTERS, GYMNASIUMS, LIBRARIES, SCHOOL CONSTRUCTION

THIS BROCHURE CONTAINS THE EDUCATIONAL FACILITIES DESIGNED FOR A TYPE D-3 JUNIOR-SENIOR HIGH SCHOOL (GRADES 7-12; CAPACITY 1,000 STUDENTS; EXPANDABLE TO 1,200 STUDENTS). A SKETCH OF THE FLOOR PLAN IS PRESENTED, AND SPECIFICATIONS ARE OUTLINED. PROVISIONS FOR A GYMNASIUM ARE INCLUDED. (FS)

Availability:

**Division of School Buildings and Grounds
State Education Department, State of New York
Albany, New York 12224**

STANDARD SCHOOL PLAN C-1

NEW YORK STATE EDUCATION DEPARTMENT, ALBANY, DIVISION OF SCHOOL BUILDINGS AND GROUNDS

010 PAGES

DESCRIPTORS- *EDUCATIONAL FACILITIES, *HIGH SCHOOLS, *SCHOOL DESIGN, *SCHOOL PLANNING, *SECONDARY SCHOOLS, AUDITORIUMS, CLASSROOMS, FALLOUT SHELTERS, GYMNASIUMS, LIBRARIES, SCHOOL CONSTRUCTION, SCIENCE FACILITIES, TEAM TEACHING

THIS BROCHURE CONTAINS THE EDUCATIONAL FACILITIES DESIGNED FOR A TYPE C-1 SENIOR HIGH SCHOOL (GRADES 10-12; 800 STUDENTS; EXPANDABLE TO 1000 STUDENTS). A SKETCH OF THE FLOOR PLAN IS PRESENTED, AND SPECIFICATIONS ARE OUTLINED. PROVISIONS FOR A GYMNASIUM ARE INCLUDED. (FS)

Availability:

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State Education Department, State of New York
Albany, New York 12224**

STANDARD SCHOOL PLAN C-2

NEW YORK STATE EDUCATION DEPARTMENT, ALBANY, DIVISION OF SCHOOL BUILDINGS AND GROUNDS

010 PAGES

DESCRIPTORS- *EDUCATIONAL FACILITIES, *HIGH SCHOOLS, *SCHOOL DESIGN, *SCHOOL PLANNING, *SECONDARY SCHOOLS, AUDITORIUMS, CLASSROOMS, GYMNASIUMS, LIBRARIES, SCHOOL CONSTRUCTION

THIS BROCHURE CONTAINS THE EDUCATIONAL FACILITIES DESIGNED FOR A TYPE C-2 SENIOR HIGH SCHOOL (GRADES 10-12; 1000 STUDENTS; EXPANDABLE TO 1,200 STUDENTS). A SKETCH OF THE FLOOR PLAN IS PRESENTED, AND SPECIFICATIONS ARE OUTLINED. PROVISIONS FOR A GYMNASIUM ARE INCLUDED. (FS)

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DESCRIPTORS- *EDUCATIONAL FACILITIES, *JUNIOR HIGH SCHOOLS, *SCHOOL DESIGN, *SCHOOL PLANNING, AUDITORIUMS, CLASSROOMS, FALLOUT SHELTERS, GYMNASIUMS, LIBRARIES, SCHOOL CONSTRUCTION

THIS BROCHURE CONTAINS THE EDUCATIONAL FACILITIES DESIGNED FOR A TYPE D-1 JUNIOR-SENIOR HIGH SCHOOL (GRADES 7-12; 800 STUDENTS; EXPANDABLE TO 1000 STUDENTS). A SKETCH OF THE FLOOR PLAN IS PRESENTED, AND SPECIFICATIONS ARE OUTLINED. PROVISIONS FOR A GYMNASIUM ARE INCLUDED. (FS)

Availability:

**Division of School Buildings and Grounds
State Education Department, State of New York
Albany, New York 12224**

A GUIDE FOR PLANNING THE FIELD HOUSE AS A COLLEGE OR SCHOOL PHYSICAL EDUCATION FACILITY

BY - PETERSEN, ALEXANDER, JR.

PUBLISHED - 1963

062 PAGES

DESCRIPTORS - *ARCHITECTURAL ELEMENTS; *BUILDING DESIGN; *EDUCATIONAL PLANNING; *FIELD HOUSES; *PHYSICAL EDUCATION FACILITIES; ATHLETICS; FACILITY GUIDELINES; PHYSICAL RECREATION PROGRAMS; RECREATIONAL FACILITIES

THE PLANNING OF FIELD HOUSES FOR SCHOOLS AND COLLEGES IS DISCUSSED IN RELATION TO THEIR VARIOUS USES, SUCH AS FOR PHYSICAL EDUCATION PROGRAMS, INTRAMURAL AND EXTRAMURAL ATHLETICS, AND INTERCOLLEGIATE ATHLETICS. FOLLOWING A PRESENTATION OF THE HISTORICAL DEVELOPMENT OF FIELD HOUSES AND THEIR EDUCATIONAL SIGNIFICANCE, DESIGNING THE FIELD HOUSE IS CONSIDERED, FOCUSING ON THE EQUIPMENT AND FACILITIES TO BE INCLUDED IN THE STRUCTURE. THE OPERATING AND SERVICING OF FIELD HOUSES IS ALSO CONSIDERED. (FS)

Availability:

Will be reported in RIE, 1970

**Bureau of Publications
Teachers' College
Columbia University
New York, New York 10027**

FIELDHOUSE PROMOTES MAXIMUM USAGE

PUBLISHED - AUGUST 1967

IN - AMERICAN SCHOOL AND UNIVERSITY; V39 N12 P33 AUGUST 1967

001 PAGES

DESCRIPTORS - *BUILDING DESIGN; *FACILITY CASE STUDIES; *FIELD HOUSES;
*GYMNASIUMS; *PHYSICAL EDUCATION FACILITIES; ARCHITECTURAL CHARACTER;
*RECREATIONAL FACILITIES

VARIOUS DESIGN AND STRUCTURAL FEATURES ARE DESCRIBED FOR MISSOURI MILITARY ACADEMY'S FIELDHOUSE. EMPHASIS IS GIVEN TO FEATURES WHICH PROMOTE ITS MULTIPURPOSE INCORPORATION FOR ATHLETICS, PARADES, DRILLS, AND OTHER CEREMONIES. PHOTOGRAPHS OF THE INTERIOR AND EXTERIOR OF THE FACILITY ARE INCLUDED. (FS)

Availability:

Buttneheim Publishing Corporation
757 Third Avenue
New York, New York 10017

STEEL SPACE FRAME SPANS MASSIVE U.C.L.A. AUDITORIUM-SPORTS ARENA

PUBLISHED-SEP68

IN- COLLEGE AND UNIVERSITY, VOL. 45, NO. 3, SEPT. 1968

003 PAGES

**DESCRIPTORS- *AUDITORIUMS, *COLLEGE BUILDINGS, *FIELD HOUSES,
*FURNITURE DESIGN, *STRUCTURAL BUILDING SYSTEMS, ECONOMICS,
FLEXIBLE FACILITIES, LIGHTING**

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THIS 300 X 400 FT. ARENA IS THE LARGEST COLLEGIATE ACTIVITY
CENTER ON THE WEST COAST. THE SPACE FRAMEFORMS A GEOMETRIC
DESIGN, UTILIZING THE BOTTOM CHORD OF THE FRAME TO SUP OF
INCANDESCENT AND MERCURY VAPOR LIGHT CLUSTERS, WHICH PERMIT A
WIDE RANGE OF ILLUMINATION FOR DIFFERENT EVENTS. SEATING INCLUDES
10,300 PERMANENT THEATER-TYPE SEATS AND 3,200 COLLAPSIBLE
BLEACHER SEATS AND FOLDING CHAIRS. (LD)**

Availability:

**McGraw-Hill
1050 Merchandise Mart
Chicago, Illinois 60654**

AIR STRUCTURES FOR SCHOOL SPORTS

BY - ROBERTSON, NAN
EDUCATIONAL FACILITIES LABORATORIES, INC., NEW YORK, NEW YORK

PUBLISHED - 1964

028 PAGES

DESCRIPTORS - *AIR STRUCTURES; *PHYSICAL EDUCATION FACILITIES; *PRE-FABRICATION; ATHLETIC ACTIVITIES; CONSTRUCTION COSTS; COSTS; MAINTENANCE; SAFETY; SCHOOL CONSTRUCTION; SCHOOL MAINTENANCE; SCHOOL SAFETY

AIR STRUCTURES ARE FABRIC BUILDINGS BLOWN UP AND HELD UP BY AIR PRESSURE. EXPERIMENTS WITH SUCH STRUCTURES WERE CONDUCTED AS EARLY AS 1917. IN 1948 THE UNITED STATES AIR FORCE SOUGHT A NEW WAY OF HOUSING LARGE RADAR ANTENNAE PLANNED FOR THE ARCTIC. AS AN OUTCOME OF THEIR SEARCH, BIRDAIR STRUCTURES, INC., WHICH IS NOW ONE OF SEVERAL COMPANIES SELLING SUCH STRUCTURES, WAS FOUNDED. EARLY EXPERIENCES WITH AIR STRUCTURES FOR SCHOOLS IN LITCHFIELD, CONNECTICUT, WERE DISAPPOINTING. THE SUBSEQUENT ERECTION OF TWO MORE BUBBLES WAS EVIDENCE THAT SATISFACTION WAS EVENTUALLY ACHIEVED. COST ESTIMATES OF \$2.14 PER SQUARE FOOT COMPARE FAVORABLY WITH WOOD-DOMED FIELDHOUSES AT \$6.53 PER SQUARE FOOT OR GEODESIC FIELDHOUSES AT \$8.34 PER SQUARE FOOT. COSTS FOR SWIMMING POOL USE ARE ESTIMATED AT \$9.38 PER SQUARE FOOT AS COMPARED TO \$26.00 AND \$32.00. EASE OF HEATING IS ALSO EMPHASIZED. INSTALLATION TIME IS APPROXIMATELY ONE DAY. THERE IS NO DANGER OF SUFFOCATION IN CASE OF DEFLATION BECAUSE THE PROCESS IS SLOW AND THE MATERIAL CAN EASILY BE LIFTED SHOULD ONE FIND IT NECESSARY TO GET OUT UNDER SUCH CONDITIONS. THERE IS NO FIRE DANGER. BECAUSE OF A HIGH REFLECTION SURFACE, LIGHTING PROBLEMS ARE MINIMAL. CURRENT EXPERIMENTS ARE BEING CARRIED OUT TO MAKE IMPROVEMENTS. INTERESTED READERS MAY SEE SUGGESTED DO'S AND DON'T'S BY REFERRING TO THIS BOOKLET. ADVANTAGES OF AIR STRUCTURES ARE COST, HEATING EASE, LIGHTING EASE, UNOBSTRUCTED AREA, PORTABILITY, MAINTENANCE, AND DEPENDABILITY. THE MAIN DISADVANTAGE IS THE LIMITED LIFE EXPECTANCY. (RH)

Availability:

Educational Facilities Laboratories, Inc.
477 Madison Avenue
New York, New York 10022

WAYLAND SENIOR HIGH SCHOOL

EDUCATIONAL FACILITIES LABORATORIES, INC., NEW YORK, N. Y.

IN- PROFILES OF SIGNIFICANT SCHOOLS

033 PAGES

DESCRIPTORS- *EDUCATIONAL PLANNING, *FLEXIBLE FACILITIES, *SCHOOL DESIGN, *SCHOOL PLANNING, *TEAM TEACHING, BUILDING DESIGN, CLOSED CIRCUIT TELEVISION, INDIVIDUALIZED INSTRUCTION, MOVABLE PARTITIONS, PHYSICAL EDUCATION FACILITIES, SCHOOL CONSTRUCTION, SCHOOL ORGANIZATION

A DESCRIPTION IS PRESENTED OF WAYLAND, MASSACHUSETTS SENIOR HIGH SCHOOL FACILITIES. SPECIAL CONSIDERATION IS GIVEN TO DESIGN AND STRUCTURAL FEATURES OF THE SCHOOL'S DOMED FIELD HOUSE. DIAGRAMMATIC REPRESENTATIONS ARE INCLUDED. (FS)

Order from EDRS as: ED 31873

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HC \$1.75

CONVENTIONAL GYMNASIUM VS GEODESIC FIELD HOUSE (A COMPARATIVE STUDY OF HIGH SCHOOL PHYSICAL EDUCATION AND ASSEMBLY FACILITIES)

MCLEOD AND FERRARA WASHINGTON, D. C.

**PUBLISHED- 61
IN- CASE STUDIES OF EDUCATIONAL FACILITIES 1**

017 PAGES

**DESCRIPTORS- *CONSTRUCTION COSTS, *FIELD HOUSES, *GYMNASIUMS,
*STRUCTURAL BUILDING SYSTEMS, COMPONENT BUILDING SYSTEMS,
PREFABRICATION**

THE STUDY OF THE COMPARATIVE COSTS OF A GEODESIC DOME FIELD HOUSE AND A CONVENTIONAL GYMNASIUM DETAILS--(1) BACKGROUND AND PURPOSE INFORMATION, (2) DESIGN CONSIDERATIONS, (3) COMPARATIVE BID DATA, AND (4) CONCLUSIONS REACHED. THE DOME PROTOTYPE WAS FOUND TO BE LARGER (SQUARE FOOTAGE), LESS EXPENSIVE, AND MORE FLEXIBLE IN TERMS OF VARIED USAGE. STATED ADVANTAGES OF THIS STRUCTURE WERE--(1) UNLIMITED SPATIAL FLEXIBILITY THROUGH ABSENCE OF STRUCTURAL SUPPORTS, (2) ECONOMICAL POTENTIAL OF A COMPONENT SYSTEM, (3) ADVANTAGEOUS CHARACTERISTICS OF ASSEMBLY IN THE ROUND, AND (4) EXCITING AESTHETIC PROPERTIES. PLANS, SECTIONS, AND PERSPECTIVES OF BOTH ALTERNATIVES ARE INCLUDED.

Order from EDRS as: ED 31038

MF \$0.25 HC \$1.10

DCMES FOR SCHOOLS

**BY- NYE, EDWARD F.
CAUDILL, ROWLETT, SCOTT AND ASSOCIATES ARCHITECTS-ENGINEERS
BRYAN, TEXAS**

**PUBLISHED- 58
IN- RESEARCH REPORT, 11**

004 PAGES

**DESCRIPTORS- *BUILDING MATERIALS, *CONSTRUCTION (PROCESS),
*FLEXIBLE FACILITIES, *SCHOOL DESIGN, *STRUCTURAL BUILDING
SYSTEMS, AUDITORIUMS, BUILDING INNOVATION, CLASSROOMS,
GYMNASIUMS, SPACE DIVIDERS**

**THE NEED FOR FLEXIBLE BUILDINGS WITH MOVABLE PARTITIONS AND
COLUMN-FREE SPACE, LEADS TO THE POSSIBILITIES OF USING STRUCTURAL
MATERIALS IN A FORM WHICH WILL ELIMINATE BENDING, USING THEIR
STRENGTH MORE EFFICIENTLY BY KEEPING THE STRESSES IN A SIMPLE
TENSION OR COMPRESSION. THIS POINTS DIRECTLY TO THE USE OF SOME
KIND OF DOME. THE DEVELOPMENT OF THE DOME IS TRACED THROUGH
HISTORY TO THE PRESENT, WITH ACTUAL EXAMPLES OF CURRENTLY
DESIGNED--(1) AUDITORIUMS, (2) AIR TERMINALS, (3) FIELD HOUSES,
(4) GYMNASIUMS, (5) CHURCHES, (6) COLISEUMS, AND (7) GEODESIC
SPACE FRAMES. SPECIFIC DISCUSSION IS GIVEN FOR DOMES USED IN
DESIGNING TEACHING SPACE, PARTICULARLY CLASSROOMS, USING SPACE
DIVIDERS AND DOME CLUSTERS. THIS IS RELATED TO THE NEED FOR FLUID
EDUCATIONAL PROGRESS. PHOTOGRAPHS SHOW CURRENT EXAMPLES OF DOME
CONSTRUCTION. (MM)**

Availability:

**Caudill, Rowlett and Scott Architects
3636 Richmond Avenue P.O. Box 22427
Houston, Texas 77026**

SWIMMING POOLS FOR SCHOOLS

BY - NEILSON, DONALD W. AND NIXON, JOHN E.

PUBLISHED - 1954

IN - MONOGRAPH 3

051 PAGES

DESCRIPTORS - *BUILDING EQUIPMENT; *HEALTH NEEDS; *PHYSICAL EDUCATION; *SCHOOL DESIGN; *SWIMMING POOLS; ATHLETIC ACTIVITIES; CONSTRUCTION COSTS; LOCKER ROOMS; RECREATIONAL FACILITIES; SAFETY; SANITATION; SPACE UTILIZATION

THE INCREASING INTEREST IN SWIMMING INSTRUCTION AND RECREATION FOR ELEMENTARY AND SECONDARY SCHOOL CHILDREN HAS RESULTED IN THE DEVELOPMENT OF THIS GUIDE FOR SWIMMING POOL USE, DESIGN, AND CONSTRUCTION. INTRODUCTORY MATERIAL DISCUSSED THE NEED FOR SWIMMING IN THE EDUCATIONAL PROGRAM AND THE ORGANIZATION OF SWIMMING PROGRAMS IN THE SCHOOL. DESIGN SPECIFICATIONS INCLUDE--(1) POOL LOCATION, (2) INDOOR-OUTDOOR POOLS, (3) POOL SHAPE AND DIMENSIONS, (4) POOL DETAILS AND EQUIPMENT, (5) SUPPORTING EQUIPMENT AND FACILITIES, AND (6) CARING FOR SWIMMING POOLS. THE DISCUSSION STRESSED COMPARISON OF ALTERNATIVE SOLUTIONS, AND HEALTH AND SAFETY CONSIDERATIONS. PHOTOGRAPHS AND DIAGRAMS SUPPLEMENT TEXT MATERIALS. AN EXTENSIVE BIBLIOGRAPHY ON SWIMMING INSTRUCTION AND POOLS IS INCLUDED. (MM)

Availability:

**Stanford University Press
Stanford, California 94305**

SWIMMING POOLS. A GUIDE TO THEIR PLANNING, DESIGN AND OPERATION

**BY - GABRIELSEN, M. ALEXANDER, ED.
COUNCIL FOR NATIONAL COOPERATION IN AQUATICS, WASHINGTON, D.C.
HOFFMAN PUBLICATIONS, INC., FORT LAUDERDALE, FLORIDA**

PUBLISHED - JUNE 1969

224 PAGES

DESCRIPTORS - *ATHLETICS; *PHYSICAL EDUCATION FACILITIES; *PHYSICAL FACILITIES; *PLANNING; *SWIMMING POOLS; ADMINISTRATION; DESIGN PREFERENCE; EQUIPMENT; GUIDES

INFORMATION IS PRESENTED REGARDING ALL PHASES OF SWIMMING POOL DEVELOPMENT AND OPERATION FROM EARLIEST PLANNING CONSIDERATIONS TO FINAL PROGRAMING. THIS COMPREHENSIVE BOOK COVERS--(1) THE STEPS INVOLVED IN PLANNING A POOL, (2) DESIGNING THE POOL, (3) WATER CIRCULATION, FILTRATION, AND TREATMENT, (4) COMMUNITY POOLS, SCHOOL AND AGENCY POOLS, AND POOLS FOR COMPETITION, (5) PORTABLE AND ABOVE GROUND POOLS, (6) POOL EQUIPMENT AND ACCESSORIES, AND (7) THE BATHOUSE AND AUXILIARY SERVICES. BOTH INDOOR AND OUTDOOR POOLS ARE CONSIDERED, AS WELL AS ALL TYPES OF PERMANANT AND TEMPORARY ENCLOSURES. SUBJECTS REGARDING POOL ADMINISTRATION AND OPERATION ARE DISCUSSED INCLUDING BUDGETING, MAINTENANCE AND SAFETY PROCEDURES. INCLUDED IN THE APPENDICES ARE WORKSHEETS FOR USE IN DETERMINING THE POOL DESIGN, CHECK LISTS FOR POOL PLANNING, SUGGESTED ORDINANCES AND REGULATION, AND AN ACTUAL FEASIBILITY STUDY THAT SECURED A NEW POOL FOR AN ILLINOIS TOWN. PHOTOGRAPHS AND DIAGRAMS ARE INCLUDED THROUGHOUT THE BOOK. (FS)

Availability:

**Hoffman Publications, Inc.
Sunrise Professional Building
Fort Lauderdale, Florida 33304**

SWIMMING POOLS

MINISTRY OF HOUSING AND LOCAL GOVERNMENT, LONDON, ENGLAND

PUBLISHED - 1962

IN - DESIGN BULL - 4

018 PAGES

DESCRIPTORS - *FACILITY GUIDELINES; *PHYSICAL EDUCATION FACILITIES; *PHYSICAL FACILITIES; *SWIMMING POOLS; FACILITY REQUIREMENTS; LOCKER ROOMS

TECHNICAL AND ENGINEERING DATA ARE SET FORTH ON THE DESIGN AND CONSTRUCTION OF SWIMMING POOLS. CONSIDERATION IS GIVEN TO SITE SELECTION, POOL CONSTRUCTION, THE COMPARATIVE MERITS OF COMBINING OPEN AIR AND ENCLOSED POOLS, AND ALTERNATIVE USES OF THE POOL. GUIDELINES ARE PRESENTED REGARDING--(1) POOL SIZE AND USE, (2) LOCKER AND CHANGING ROOMS, (3) SPECTATOR ACCOMMODATION, AND (4) ENTRANCE HALL AND ANCILLARY ACCOMMODATIONS. RECOMMENDATIONS ARE INCLUDED FOR ENGINEERING SERVICES (PURIFICATION OF WATER, HEATING AND VENTILATION, ELECTRICAL INSTALLATION, LIGHTING, AND ACOUSTICS). (FS)

Availability:

Will be reported in RIE, 1970

**British Information Services
845 Third Avenue
New York, New York 10022 (\$0.30)**

**SUGGESTED ORDINANCE AND REGULATIONS COVERING PUBLIC SWIMMING
POOLS**

AMERICAN PUBLIC HEALTH ASSOCIATION, NEW YORK, N. Y.

PUBLISHED- 64

**AVAILABLE FROM- AMERICAN PUBLIC HEALTH ASSOCIATION, 1790
BROADWAY, NEW YORK 19, N. Y.**

037 PAGES

**DESCRIPTORS- *DESIGN NEEDS, *LEGISLATION, *RECREATIONAL
FACILITIES, *STANDARDS, *SWIMMING POOLS, CONSTRUCTION NEEDS,
GUIDELINES, INFECTIOUS DISEASES, MAINTENANCE, PUBLIC HEALTH,
SAFETY**

**IN PREPARING THIS PUBLICATION, THE JOINT COMMITTEE ON
SWIMMING POOLS AND BATHING PLACES INTENDED TO PROMOTE THE PROPER
INSTALLATION OF PUBLIC SWIMMING POOL FACILITIES AND THEIR
EFFICIENT OPERATION. OBJECTIVES WERE--(1) TO BE CONCERNED WITH
THE DEVELOPMENT OF REALISTIC AND REASONABLE MINIMUM STANDARDS TO
SAFEGUARD THE HEALTH AND SAFETY OF SWIMMERS AND BATHERS, (2) TO
DEVELOP STANDARDS THAT HAD SOME DEGREE OF FLEXIBILITY, AND (3) TO
PRODUCE A LEGAL INSTRUMENT THAT COULD BE USED AS A GUIDE BY
GOVERNMENT IN EXACTING MINIMUM SWIMMING POOL STANDARDS. THIS
ORDINANCE AND THESE REGULATIONS, IF ENACTED, SHOULD SERVE TO
MINIMIZE THE SPREAD OF INFECTIONS, REDUCE INJURIES THROUGH
ELIMINATION OF HAZARDS, AND PROMOTE PUBLIC SWIMMING POOLS AS
ATTRACTIVE AND SAFE PLACES FOR ENJOYMENT, RECREATION, AND
PHYSICAL FITNESS. WHILE THIS REPORT IS IN THE FORM OF SUGGESTED
LEGISLATION, IT IS ALSO A GUIDE AND MAY BE USED IN THE EVALUATION
OF THE DESIGN, CONSTRUCTION, OPERATION AND MAINTENANCE OF PUBLIC
SWIMMING POOLS. (RK)**

Order from EDRS as: ED 27709

MF \$0.25 HC \$1.95

FROM EAST AND WEST. TWO INDOOR SWIMMING POOLS

PUBLISHED - AUGUST 1967

IN - AMERICAN SCHOOL AND UNIVERSITY; V39 N 12 P30-31 AUGUST 1967

002 PAGES

DESCRIPTORS - *BUILDING DESIGN; *FACILITY CASE STUDIES; *PHYSICAL EDUCATION FACILITIES; *RECREATIONAL FACILITIES; *SWIMMING POOLS; ARCHITECTURAL CHARACTER; FACILITY GUIDELINES

DESIGN, STRUCTURAL, AND FUNCTIONAL FEATURES ARE DESCRIBED FOR THE INDOOR SWIMMING POOLS OF PACIFIC LUTHERAN UNIVERSITY AND CENTRAL CONNECTICUT STATE COLLEGE. CONSIDERATION IS GIVEN TO DECK AND DIVING AREAS, STORAGE AREAS, WALLS OF THE POOL ENCLOSURE, SPECTATOR FACILITIES, LOCKER ROOMS, ACOUSTICAL TREATMENT, LIGHTING, AND VENTILATION SYSTEMS, AND RELATION OF THE POOL TO THE MAIN PHYSICAL EDUCATION FACILITY. PHOTOGRAPHS OF EACH POOL FACILITY ARE INCLUDED. (FS)

Availability:

Buttenheim Publishing Corporation
757 Third Avenue
New York, New York 10017

1968 LISTING OF SWIMMING POOL EQUIPMENT

NATIONAL SANITATION FOUNDATION, ANN ARBOR, MICHIGAN, TESTING LABORATORY

PUBLISHED - APRIL 1968

026 PAGES

DESCRIPTORS - *EQUIPMENT STANDARDS; *BUILDING EQUIPMENT; *PUBLIC HEALTH;
*SANITATION; *SWIMMING POOLS

AN UP-TO-DATE LISTING OF SWIMMING POOL EQUIPMENT INCLUDING--(1) COMPANIES AUTHORIZED TO DISPLAY THE NATIONAL SANITATION FOUNDATION SEAL OF APPROVAL, (2) EQUIPMENT LISTED AS MEETIN NSF SWIMMING POOL EQUIPMENT STANDARDS RELATING TO DIATOMITE TYPE FILTERS, (3) EQUIPMENT LISTED AS MEETING NSF SWIMMING POOL EQUIPMENT STANDARDS RELATING TO SAND TYPE FILTERS, (4) EQUIPMENT LISTED AS MEETING NSF SWIMMING POOL EQUIPMENT STANDARDS RELATING TO AUTOMATIC SURFACE SKIMMERS, (5) EQUIPMENT LISTED AS MEETING NSF STANDARD RELATING TO CENTRI-FUGAL PUMPS, AND (6) INDEX TO COMPANY SEAL OF APPROVAL NUMBERS. (RH)

Order from EDRS as: ED 25904

MF \$0.25

HC \$1.40

CENTRIFUGAL PUMPS FOR SWIMMING POOLS. NATIONAL SANITATION FOUNDATION
STANDARD NUMBER 17

PUBLISHED - JUNE 1967

030 PAGES

DESCRIPTORS - *BUILDING EQUIPMENT; *EQUIPMENT STANDARDS; *PUBLIC HEALTH;
*SANITATION; *SWIMMING POOLS

THE PUMPS DISCUSSED HEREIN ARE INTENDED TO BE USED FOR RECIRCULATING WATER IN SWIMMING POOLS, BOTH PUBLIC AND PRIVATE. INCLUDED ARE THE BASIC COMPONENTS WHICH MAY BE A PART OF A PUMP SUCH AS THE HOUSING, STRAINER, IMPELLER, VALVES, AND SUCH OTHER PARTS AS ARE ATTACHED OR A PART OF THE PUMP AS SUPPLIED BY THE MANUFACTURER. THIS STANDARD IS INTENDED TO APPLY TO PUMPS OF 3 HP SIZE OR SMALLER. DISCUSSED ARE--(1) MINIMUM REQUIREMENTS, (2) DEFINITIONS, (3) MATERIALS, (4) DESIGN AND CONSTRUCTION, AND (5) MOTORS. ALSO INCLUDED ARE TESTING CONDITIONS AND PROCEDURES, AND RECOMMENDED PRACTICES FOR SELECTION AND INSTALLATION. (RH)

Availability:

National Sanitation Foundation Headquarters
2355 West Stadium Blvd.
Ann Arbor, Michigan 48106

SWIMMING POOL WATER TREATMENT CHEMICALS AND/OR PROCESSES. STANDARD NO. 22

NATIONAL SANITATION FOUNDATION, ANN ARBOR, MICHIGAN

PUBLISHED - FEBRUARY 1968

042 PAGES

DESCRIPTORS - *CHEMISTRY; *PUBLIC HEALTH; *SANITATION IMPROVEMENT; *STANDARDS;
*SWIMMING POOLS; ENVIRONMENTAL CRITERIA; FACILITY GUIDELINES; SANITATION;
WATER RESOURCES

CHEMICALS OR PROCESSES USED OR INTENDED FOR USE, IN THE TREATMENT OF SWIMMING POOL WATER ARE COVERED. MINIMUM PUBLIC HEALTH LIMITS OR ACCEPTABILITY IN REGARD TO TOXICITY, BIOCIDAL EFFECTIVENESS, AND CHEMICAL BEHAVIOR AND ANALYSIS ARE PRESENTED. THE APPENDICES GIVE GUIDELINES TO THE SCIENTIFIC AND STATISTICALLY SOUND EVALUATIONS TO DETERMINE THE EFFICACY AND SAFETY OF SWIMMING POOL WATER TREATMENT CHEMICALS OR PROCESSES. (RH)

Availability:

National Sanitation Foundation
P.O. Box 1468
Ann Arbor, Michigan 48106

SAND TYPE FILTERS FOR SWIMMING POOLS

NATIONAL SANITATION FOUNDATION, ANN ARBOR, MICHIGAN

PUBLISHED-UCT66

REPORT/SERIES NO.- STANDARD NO. 10

032 PAGES

DESCRIPTORS- *BUILDING EQUIPMENT, *EQUIPMENT STANDARDS, *PUBLIC HEALTH, *SANITATION, *SWIMMING POOLS

SAND TYPE FILTERS ARE COVERED IN THIS STANDARD. THE FILTERS DESCRIBED ARE INTENDED TO BE DESIGNED AND USED SPECIFICALLY FOR SWIMMING POOL WATER FILTRATION, BOTH PUBLIC AND RESIDENTIAL. INCLUDED ARE THE BASIC COMPONENTS WHICH ARE A NECESSARY PART OF THE SAND TYPE FILTER SUCH AS FILTER HOUSING, UPPER AND LOWER DISTRIBUTION SYSTEMS FILTER MEDIA, SUPPORTING MATERIAL (WHEN REQUIRED) PIPING, VALVES, GAUGES, AND OTHER ACCESSORIES AS REQUIRED FOR THE PROPER FUNCTION AND OPERATION OF SUCH FILTERS. STANDARD INCLUDES--(1) MINIMUM REQUIREMENTS, (2) DEFINITIONS, (3) MATERIALS, AND (4) DESIGN AND CONSTRUCTION. A FINAL SECTION INCLUDES RECOMMENDATIONS FOR INSTALLATION AND OPERATION. (RH)

Order from EDRS as: ED 25899

MF \$0.25 HC \$1.70

DIATOMITE TYPE FILTERS FOR SWIMMING POOLS

NATIONAL SANITATION FOUNDATION, ANN ARBOR, MICHIGAN

PUBLISHED-OCT66

REPORT/SERIES NO.- STANDARD NO. 9

037 PAGES

**DESCRIPTORS- *BUILDING EQUIPMENT, *EQUIPMENT STANDARDS,
*SANITATION, *SWIMMING POOLS, PUBLIC HEALTH**

PRESSURE AND VACUUM DIATOMITE TYPE FILTERS ARE COVERED IN THIS STANDARD. THE FILTERS HEREIN DESCRIBED ARE INTENDED TO BE DESIGNED AND USED SPECIFICALLY FOR SWIMMING POOL WATER FILTRATION, BOTH PUBLIC AND RESIDENTIAL. INCLUDED ARE THE BASIC COMPONENTS WHICH ARE A NECESSARY PART OF THE DIATOMITE TYPE FILTER SUCH AS FILTER HOUSING, ELEMENT SUPPORTS, FILTER SEPTA, MECHANICAL CLEANING DEVICES AND OTHER SIMILAR ACCESSORIES. NOT INCLUDED IN THIS STANDARD ARE FILTERS WHICH DO NOT USE A FILTER AID SUCH AS DIATOMACEOUS EARTH, PROCESSED PERLITE OR SIMILAR MATERIAL. INCLUDED IN THIS STANDARD ARE--(1) MINIMUM REQUIREMENTS, (2) DEFINITIONS, (3) MATERIALS, AND (4) DESIGN AND CONSTRUCTION. A FINAL SECTION DISCUSSED RECOMMENDATIONS FOR INSTALLATION AND OPERATION. (RH)

Order from EDRS as: ED 25900

MF \$0.25 HC \$1.95

RELATING TO ADJUSTABLE OUTPUT RATE CHEMICAL FEEDING EQUIPMENT FOR
SWIMMING POOLS

NATIONAL SANITATION FOUNDATION, ANN ARBOR, MICHIGAN, NATIONAL
SANITATION FOUNDATION COMMITTEE FOR SWIMMING POOL EQUIPMENT
STANDARDS

PUBLISHED-JAN67

IN- NATIONAL SANITATION FOUNDATION STANDARD NUMBER 19

18 PAGES

DESCRIPTORS- *EQUIPMENT STANDARDS, *PUBLIC HEALTH, *RECREATIONAL
FACILITIES, *SWIMMING POOLS, SANITATION

THE SCOPE OF THIS STANDARD COVERS ADJUSTABLE OUTPUT RATE
CHEMICAL FEEDERS, WHETHER USED FOR SOLUTIONS, SLURRIES OR SOLIDS.
IT ALSO INCLUDES AUXILIARY EQUIPMENT SUCH AS PUMPS, STRAINERS,
TUBING CONNECTIONS, TACKS, INJECTION FITTINGS AND OTHER REQUIRED
COMPONENTS. THE FEEDERS DESCRIBED ARE INTENDED TO BE DESIGNED AND
USED SPECIFICALLY FOR CHEMICAL FEEDING FOR BOTH PUBLIC AND
PRIVATE RESIDENTIAL SWIMMING POOLS. NOT INCLUDED IN THIS STANDARD
ARE GASEOUS FEED EQUIPMENT, FEEDERS WITHOUT ADJUSTABLE OUTPUT
RATES, OR FEEDERS WHOSE OUTPUT RATE IS DEPENDENT ON THE FLOW RATE
OF THE MEDIUM INTO WHICH THE CHEMICALS ARE INTRODUCED. SECTION 1
INCLUDES--(1) MINIMUM REQUIREMENTS, (2) ALTERNATE MATERIALS, (3)
REVIEWS AND REVISIONS, AND (4) VARIATIONS IN DESIGN AND
OPERATION. SECTION 2 COVERS DEFINITIONS AND TERMINOLOGY. SECTION
3, SUITABLE MATERIALS, AND SECTION 4, DESIGN AND CONSTRUCTION.
(RH)

Order from EDRS as: ED 19844

MF \$0.25

HC \$0.80

RELATING TO RECESSED AUTOMATIC SURFACE SKIMMERS FOR SWIMMING
POOLS

NATIONAL SANITATION FOUNDATION, ANN ARBOR, MICHIGAN, NATIONAL
SANITATION FOUNDATION COMMITTEE FOR SWIMMING POOL EQUIPMENT
STANDARDS

PUBLISHED-JAN66

IN- NATIONAL SANITATION FOUNDATION STANDARD NUMBER 11

018 PAGES

DESCRIPTORS- *EQUIPMENT STANDARDS, *PUBLIC HEALTH, *SWIMMING
POOLS, SANITATION

THE NATIONAL SANITATION FOUNDATION STANDARD ON SWIMMING POOL
EQUIPMENT CONCERNS ITSELF WITH THE SUCCESSFUL APPLICATION OF
SURFACE SKIMMERS TO SWIMMING POOLS. THE MINIMUM DESIGN AND
CONSTRUCTION REQUIREMENTS ESTABLISHED BY THIS STANDARD ARE SET
FORTH TO PROVIDE A MEANS OF EVALUATING THE OVERALL CONSTRUCTION
AND EFFECTIVENESS OF THE UNIT. ADDITIONAL CONCERN IS GIVEN TO THE
FACTORS RELATING TO THE APPLICATION OF SURFACE SKIMMERS AND THEIR
INTEGRATION INTO THE OVERALL HYDRAULIC PERFORMANCE OF THE
CIRCULATORY SYSTEM. SURFACE SKIMMERS REMOVE DIRT AND OIL LADEN
FILM FROM THE SURFACE OF THE SWIMMING POOL THROUGH A CONTINUOUS
REMOVAL PROCESS. THE SURFACE DRAW DEPENDS ON A COMBINATION OF
SURFACE TENSION, EFFECTIVE VELOCITY, AND WIND DRIFT EFFECTS. THIS
SPECIFICATION IS DIVIDED INTO FOUR SECTIONS--(1) GENERAL SCOPE,
(2) DEFINITIONS, (3) MATERIALS OF CONSTRUCTION, AND (4) DESIGN
AND CONSTRUCTION. RECOMMENDATIONS FOR INSTALLATION ARE ALSO
GIVEN. (RH)

Order from EDRS as: ED 19842

MF \$0.25

HC \$0.80

ATHLETIC LOCKERS FOR SCHOOLS AND COLLEGES; THEIR DESIGN - SELECTION - AND PURCHASE WITH FUNCTIONAL TIPS AND SUGGESTIONS FOR THE MODERN ATHLETIC LOCKER ROOM

BY - DICKEY, DONALD D.

PUBLISHED - 1967

029 PAGES

DESCRIPTORS - *ATHLETIC EQUIPMENT; *EQUIPMENT STORAGE; *LOCKER ROOMS; *PHYSICAL EDUCATION FACILITIES; *PURCHASING; EQUIPMENT STANDARDS; FIELD HOUSES; GYMNASIUMS; SPECIFICATIONS

INFORMATION IS PROVIDED RELATIVE TO THE DESIGN, SELECTION, AND PURCHASE OF LOCKER EQUIPMENT FOR ATHLETIC AND PHYSICAL EDUCATION USE. SOME SUGGESTIONS OFFERED ARE FOR BOTH SPECIFIC APPLICATIONS, AND SOME ARE GENERAL TO ANY LOCKER DRESSING ROOM. AMONG THE TOPICS DISCUSSED ARE CONSTRUCTION AND JOINING OF LOCKERS, VENTILATION AND DRYING, ADMINISTRATIVE PROBLEMS, AND SECURITY. (FS)

Order from EDRS as: ED 31041

MF \$0.25 HC \$1.55

CHOOSING THE RIGHT ATHLETIC LOCKER FOR SCHOOLS AND COLLEGES

BY - DICKEY, DONALD D.

PUBLISHED - AUGUST 1967

IN - AMERICAN SCHOOL AND UNIVERSITY; V39 N12 P35, 49 AUGUST 1967

002 PAGES

**DESCRIPTORS - *GUIDELINES; *LOCKER ROOMS; *PHYSICAL EDUCATION FACILITIES;
*PURCHASING; ATHLETIC EQUIPMENT**

GUIDELINES ARE PRESENTED FOR SELECTING PROPER ATHLETIC LOCKERS FOR SCHOOLS AND COLLEGES. CONSIDERATION IS GIVEN TO VARIOUS ASPECTS OF LOCKER CONSTRUCTION, COLOR FOR LOCKERS, LATCHING DEVICES, AND NUMBER PLATES. INFORMATION IS INCLUDED ON FACTORS REGARDING THE PREPARATION OF LOCKER ORDERS. (FS)

Availability:

**Buttenheim Publishing Corporation
757 Third Avenue
New York, New York 10017**

MAINTENANCE OF SCHOOL GYMNASIUMS

FINCHUM, R.N.

PUBLISHED - MAY 1965

IN - SCHOOL ACTIVITIES; MAY 1965

DESCRIPTORS - *BUILDING OPERATION; *GYMNASIUMS; *HEALTH CONDITIONS;
*PHYSICAL EDUCATION FACILITIES; *SCHOOL MAINTENANCE; FLOORING; LIGHTING;
SAFETY; SANITATION

PROCEDURES ARE SUGGESTED THAT MAY BE HELPFUL TO THOSE RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF SCHOOL BUILDINGS AND GYMNASIUMS. MOST SCHOOLS WITH GYMNASIUMS UTILIZE THEM FOR BOTH INSTRUCTIONAL AND SPORTS PURPOSES. MAINTENANCE OF THE MULTIPURPOSE GYM ARE DISCUSSED UNDER FOUR SUBJECT AREAS--(1) FLOORS, (2) LIGHTING, (3) SANITATION, AND (4) SAFETY. A RENOVATION PROCEDURE TO BE USED IF A GYMNASIUM FLOOR IS SLIGHTLY WARPED OR IS IN NEED OF COMPLETE RENOVATION IS INCLUDED. LIGHTING SYSTEMS MUST BE CONSIDERED IN TERMS OF QUALITY OF ILLUMINATION, REPLACEMENT AND CLEANING. SPECIFIC ATTENTION MUST BE GIVEN TO THE SANITARY MAINTENANCE OF FLOORS, SHOWER STALL, WATER CLOSETS, URINALS, LAVATORIES AND DRINKING FOUNTAINS AUXILIARY TO A GYMNASIUM. BRIEF MENTION IS MADE OF THE MAINTENANCE FUNCTIONS THAT MIGHT PREVENT FALLS AND THOSE THAT CONTRIBUTE TO SAFE, ORDERLY EVACUATION IN CASE OF FIRE OR AN EXPLOSION. (RK)

Availability:

School Activities Magazine
Box 196
Tescott, Kansas

**SANITATION IN SCHOOL HOUSEKEEPING, A TRAINING COURSE FOR SCHOOL
CUSTODIANS**

**FLORIDA STATE DEPT. OF EDUCATION, TALLAHASSEE, SCHOOL PLANT
MANAGEMENT SECTION**

PUBLISHED-MAY65

142 PAGES

**DESCRIPTORS- *CLEANING, *CUSTODIAL TRAINING, *METHODS,
*SANITATION, *SCHOOL MAINTENANCE, DINING FACILITIES, EQUIPMENT,
HEALTH CONDITIONS, HEALTH EDUCATION, HEALTH FACILITIES, HYGIENE,
INFECTIOUS DISEASES, LOCKER ROOMS, PUBLIC HEALTH, SCHOOL
ENVIRONMENT, STANDARDS**

**THE MOST EFFICIENT AND MODERN METHODS FOR CLEANING AND
SANITIZING SCHOOL FACILITIES ARE PRESENTED FOR THE BENEFIT OF
SCHOOL CUSTODIANS. CAREFUL ATTENTION TO THE TOTAL SCHOOL
ENVIRONMENT CAN BE SUPPORTIVE OF THE GENERAL EDUCATION PROGRAM
AND AT THE SAME TIME MAKE A SOUND CONTRIBUTION TO THE HEALTH AND
HEALTH EDUCATION. TOPICS DISCUSSED INCLUDE--(1) ORIENTATION AND
DEFINITIONS, (2) BASIC BACTERIOLOGY AND CHEMISTRY, (3) CLEANING
AND SANITIZING METHODS, AND (5) PEST CONTROL. A BIBLIOGRAPHY IS
PROVIDED. (RK)**

Order from EDRS as: ED 25916

MF \$0.75 HC \$7.20

OUTDOOR PHYSICAL EDUCATION AREAS AND FACILITIES

THE DESIGN OF OUTDOOR PHYSICAL EDUCATION FACILITIES FOR COLLEGES AND SCHOOLS

BY- DELAMATER, JAMES B.
COLUMBIA UNIVERSITY, NEW YORK, INST. OF FIELD STUDIES

PUBLISHED- 63

135 PAGES

DESCRIPTORS- *COLLEGES, *DESIGN, *PHYSICAL EDUCATION FACILITIES, *PLANNING, *SCHOOLS, COSTS, ECONOMICS, EQUIPMENT, FACILITY GUIDELINES, HEALTH, ILLUMINATION LEVELS, LANDSCAPING, LIGHTING, MAINTENANCE, PARKING FACILITIES, SAFETY, SITE SELECTION, SPACE UTILIZATION

SPECIALIZED INFORMATION IS PRESENTED FOR THOSE INVOLVED IN ASSURING IMPROVEMENT IN THE OUTDOOR PHYSICAL EDUCATION FACILITIES OF THE FUTURE. THE MATERIALS INCLUDED ARE INTENDED TO BE USEFUL TO ARCHITECTS, ENGINEERS AND DESIGNERS GENERALLY, PROGRAM SPECIALISTS, ADMINISTRATORS AND CONSULTANTS IN EDUCATION, AND STUDENTS PREPARING FOR PROFESSIONAL CAREERS IN PHYSICAL EDUCATION. SPECIFIC CHAPTERS DISCUSS THE FOLLOWING TOPICS--(1)COMPREHENSIVE PLANNING,(2)PLANNING OBJECTIVES,(3)SITE SELECTION,(4)COMMON PROBLEMS OF SPACE UTILIZATION,(5)THE ORIENTATION OF OUTDOOR PHYSICAL EDUCATION FACILITIES,(6)PHYSICAL EDUCATION PLAY SURFACES,(7)SPORTS LIGHTING, AND (8)SERVICE FACILITIES. (RK)

Order from EDRS as: ED 28626

MF \$0.75 HC \$6.85

PLANNING THE OUTDOOR PHYSICAL EDUCATION FACILITIES FOR CENTRAL SCHOOLS

STATE UNIVERSITY OF NEW YORK, ALBANY

PUBLISHED- 47

029 PAGES

DESCRIPTORS- *EDUCATIONAL FACILITIES , *PHYSICAL EDUCATION, *PHYSICAL EDUCATION FACILITIES, *RECREATIONAL FACILITIES, ATHLETICS, EDUCATIONAL PLANNING, EXTRAMURAL ATHLETIC PROGRAMS, INTRAMURAL ATHLETIC PROGRAMS, PHYSICAL FACILITIES, PLANNING

PLANNING OUTDOOR PHYSICAL EDUCATION FACILITIES FOR THE CENTRAL SCHOOL SERVING PUPILS FROM KINDERGARTEN THROUGH HIGH SCHOOL SHOULD TAKE INTO ACCOUNT THE NEEDS AND INTERESTS OF ALL PUPILS DURING THE SCHOOL YEAR AND SHOULD PROVIDE FOR RECREATION NEEDS DURING VACATION PERIODS. PROVISION FOR RECREATIONAL FACILITIES FOR ADULTS SHOULD ALSO BE MADE. THE FIRST OF FIVE DISTINCT PLAY AREAS DESCRIBED IS THE ELEMENTARY AREA. THREE ACRES FOR 300 PUPILS PLUS ONE-HALF ACRE PER HUNDRED PUPILS OVER THIS AMOUNT ARE NEEDED FOR THIS PURPOSE. AREAS FOR KINDERGARTEN SHOULD INCLUDE TURF, APPARATUS, AND SHADE. SECONDLY, COURTS SHOULD BE PROVIDED. AN ACRE IS SUGGESTED FOR FACILITIES OF THIS KIND. A THIRD AREA SHOULD BE FOR HIGH SCHOOL GIRLS. TWO ACRES ARE NEEDED FOR THE VARIOUS FIELD ACTIVITIES OF THIS GROUP. THE FOURTH AREA SHOULD BE FOR HIGH SCHOOL BOYS. THREE ACRES WILL BE SUFFICIENT FOR THE ACTIVITIES OF THIS GROUP. THE LAST AREA SHOULD BE FOR INTERSCHOLASTIC ATHLETIC COMPETITION. VARIOUS PLANS ARE SUGGESTED WHICH REQUIRE DIFFERING AMOUNTS OF SPACE. SOME AREAS MAY BE ABLE TO CONSIDER WINTER ACTIVITIES ALSO. THIS SITE WILL DETERMINE WHETHER OR NOT SLIDING WILL BE FEASIBLE, AND SKATING IS YET ANOTHER CONSIDERATION. NUMEROUS DRAWINGS OF REGULATION FIELDS AND COURTS ARE PROVIDED. (RH)

Order from EDRS as: ED 18923

MF \$0.25 HC \$1.24

SWANNEE AREA PHYSICAL EDUCATION PROJECT (INNOVATIONS IN
ELEMENTARY PHYSICAL EDUCATION EQUIPMENT)

COLUMBIA COUNTY BOARD OF PUBLIC INSTRUCTION, FLORIDA

045 PAGES

DESCRIPTORS- *ELEMENTARY SCHOOLS, *EQUIPMENT, *EQUIPMENT
STANDARDS, *PHYSICAL ACTIVITIES, *PHYSICAL FITNESS

THE APPARATUS, EQUIPMENT, AND COURSES DESCRIBED IN THIS
REPORT ARE PURPORTED TO BE DESIGNED TO DEVELOP A HIGH LEVEL OF
PHYSICAL FITNESS AND TO IMPROVE MOTOR SKILLS, AGILITY AND
BALANCE. INFORMATION ON EQUIPMENT COST, SAFETY FACTORS,
MAINTENANCE, AND PLAYGROUND PLACEMENT FOR DIFFERENT TYPES OF
EQUIPMENT IS CITED. SPECIFICATIONS ARE GIVEN FOR OBSTACLE COURSES
AND EQUIPMENT, HARD SURFACED GAME AREAS AND EXERCISE EQUIPMENT.
DIAGRAMS FOR VARIOUS TYPES OF OUTDOOR APPARATUS ARE ALSO
INCLUDED. (GM)

Order from EDRS as: ED 18968

MF \$0.25 HC \$1.88

PLAYING FIELDS AND HARD SURFACE AREAS

DEPARTMENT OF EDUCATION AND SCIENCE, LONDON, ENGLAND

PUBLISHED - 1966

IN - BUILDING BULL - 28

092 PAGES

DESCRIPTORS - *ATHLETIC FIELDS; *FACILITY GUIDELINES; *PHYSICAL EDUCATION FACILITIES; *PLAYGROUNDS; FACILITY REQUIREMENTS

GUIDELINES ARE PRESENTED REGARDING THE PLANNING, LAYOUT, CONSTRUCTION, AND MAINTENANCE OF OUTDOOR PLAYING FIELDS FOR PHYSICAL EDUCATION. CONSIDERATION IS GIVEN TO THE DUAL USE OF PLAYING FIELDS BY THE SCHOOL AND THE COMMUNITY, THE PLANNING OF HARD SURFACE PLAYING AREAS, AND SPECIFICATIONS AND BILLS OF QUANTITIES. MAINTENANCE COSTS OF GRASS PLAYING FIELDS, SPECIFICATIONS FOR PLAYING FIELDS AND OTHER GAMES PROVISIONS, AND SEED MIXTURES AND SEED-TURF ANALYSES ARE SET FORTH IN THE APPENDICES. DIAGRAMMATIC ILLUSTRATIONS ARE INCLUDED THROUGHOUT. (FS)

Availability:

Will be reported in RIE, 1970

British Information Services
845 Third Avenue
New York, New York 10022 (\$1.50)

HOW TO BUILD A TRACK

**BY - JONES, THOMAS E.
WISCONSIN UNIVERSITY, MADISON, EXTENSION DIVISION**

PUBLISHED - 55

087 PAGES

**DESCRIPTORS - *ATHLETIC FIELDS; *BUILDING MATERIALS; *CONSTRUCTION (PROCESS);
*FACILITY REQUIREMENTS; *PHYSICAL EDUCATION FACILITIES; ATHLETICS; PHYSICAL
FACILITIES**

**IN CONSIDERING VARIOUS ASPECTS OF TRACK CONSTRUCTION, INFORMATION IS PROVIDED
REGARDING -- (1) GENERAL REQUIREMENTS FOR A STANDARD TRACK, (2) SELECTION OF
A SITE, (3) CONSTRUCTION OF THE BODY OF THE TRACK, (4) TRACK MEASUREMENTS AND
MARKERS, (5) CARE OF THE TRACK, (6) SPECIFICATIONS FOR CONSTRUCTION OF
TAKEOFFS, RUNWAYS, CIRCLES, AND FIELD AREAS, (7) MINIMUM REQUIREMENTS FOR
HIGH SCHOOL TRACKS, (8) CONSTRUCTION AND CARE OF INDOOR TRACKS, AND (9)
PREPARATION FOR CONDUCTING A TRACK MEET. DIAGRAMS AND SPECIFICATIONS OF
SOME OF THE BEST TRACKS IN THE WORLD ARE INCLUDED. (FS)**

Availability:

**University of Wisconsin
Department of Physical Education
Extension Division
Madison, Wisconsin 53706**

**TENNIS COURT LAYOUT AND CONSTRUCTION FOR SCHOOL CLASS GROUP
INSTRUCTION AND SCHOOL-COMMUNITY RECREATION**

**BY- GUTHRIE, LUELL W. AND WILLIAMS, GEORGIA R.
STANFORD UNIVERSITY, CALIFORNIA, SCHOOL PLANNING LABORATORY**

PUBLISHED- 59

033 PAGES

**DESCRIPTORS- *PHYSICAL EDUCATION FACILITIES, *RECREATIONAL
FACILITIES, ATHLETICS, EDUCATIONAL FACILITIES, PHYSICAL
EDUCATION, RECREATION, PLAYGROUNDS**

**RECOMMENDATIONS ARE PRESENTED REGARDING THE LAYOUT AND CONSTRUCTION
OF TENNIS COURTS. IN REGARD TO LAYOUT, INFORMATION IS PRESENTED PERTAINING
TO SITE LOCATION AND SELECTION, NUMBER OF COURTS, COURT ORIENTATION, AND
COURT ARRANGEMENT. SOME OF THE CONSTRUCTION FACTORS GIVEN CONSIDERATION
INCLUDE SURFACING MATERIALS, SLOPES AND DRAINAGE, COURT EQUIPMENT AND
ACCESSORIES, AND LANDSCAPING. FINANCING, COST ANALYSIS, AND MAINTENANCE
FACTORS ARE ALSO CONSIDERED. (FS)**

Availability:

**School Planning Laboratory
School of Education
Stanford University
Stanford, California 94305**

PLANNING OUTDOOR AREAS FOR ATHLETICS AND RECREATION

PUBLISHED - AUGUST 1967

IN - AMERICAN SCHOOL AND UNIVERSITY; V39 N12 P23-26, 45 AUGUST 1967

005 PAGES

DESCRIPTORS - *ATHLETIC FIELDS; *FACILITY GUIDELINES; *FACILITY REQUIREMENTS; *PLANNING; *RECREATIONAL FACILITIES; ATHLETIC EQUIPMENT; PHYSICAL RECREATION PROGRAMS

FACILITY REQUIREMENTS AND GUIDELINES ARE PRESENTED FOR THE PLANNING OF OUTDOOR ATHLETIC AND RECREATION AREAS. CONSIDERATION IS GIVEN TO AREAS FOR EACH OF THE FOLLOWING ACTIVITIES--(1) BADMINTON, (2) BASEBALL, (3) BASKETBALL, (4) FIELD HOCKEY, (5) FOOTBALL, (6) SHUFFLEBOARD, (7) SOCCER, (9) TENNIS, (10) TRACK AND FIELD, AND (11) VOLLEYBALL. INFORMATION IS INCLUDED REGARDING ARE DIMENSIONS, SURFACING MATERIALS, FENCING, GRADING, DRAINAGE, LIGHTING, ORIENTATION, AND PROVISIONS FOR EQUIPMENT. ILLUSTRATIVE PHOTOGRAPHS ARE ALSO INCLUDED. (FS)

Availability:

**Buttenheim Publishing Corporation
757 Third Avenue
New York, New York 10017**

**FACILITIES AND SPACE ALLOCATIONS FOR PHYSICAL EDUCATION OUTDOOR
TEACHING STATIONS FOR ELEMENTARY AND INTERMEDIATE PUBLIC SCHOOLS
(BULLETIN 40, 1967 EDITION)**

**BY- RAFFERTY, MAX
CALIFORNIA STATE DEPARTMENT OF EDUCATION, SACRAMENTO**

PUBLISHED- 67

029 PAGES

**DESCRIPTORS- *ATHLETIC ACTIVITIES, *PHYSICAL ACTIVITIES,
*PHYSICAL EDUCATION, *RECREATIONAL ACTIVITIES, PLANNING,
ELEMENTARY SCHOOLS, SCHOOL PLANNING**

**THE PURPOSE OF THIS BULLETIN IS TO PRESENT
RECOMMENDATIONS FOR MINIMUM OUTDOOR FACILITIES AND SPACE
ALLOCATIONS FOR A BALANCED PHYSICAL EDUCATION PROGRAM FOR GRADES
K-8 IN PUBLIC SCHOOLS. IN THE BULLETIN ONLY SPACE REQUIREMENTS
FOR PHYSICAL EDUCATION TEACHING STATIONS ARE DESCRIBED. INCLUDED
IN THE BULLETIN ARE RECOMMENDATIONS FOR SITE PLANNING AND SPACE
ARRANGEMENTS AS THEY ARE RELATED TO GRADE LEVEL, TYPES OF
SURFACING AND PUPIL-SPACE RATIOS. SUGGESTIONS ARE MADE FOR
APPARATUS AND GAME AREA SPACE ALLOCATIONS. ALSO INCLUDED ARE
CHARTS, DIAGRAMS AND MATRICES PERTAINING TO THE K-8 PHYSICAL
EDUCATION PROGRAMS. (GM)**

Order from EDRS as: ED 16371

MF \$0.25 HC \$1.24

CARE AND OPERATION OF STADIA

**BY- BUSH, GEORGE H.
ASSOCIATION OF SCHOOL BUSINESS OFFICIALS, EVANSTON, ILLINOIS**

**PUBLISHED-OCT55
IN- PROCEEDINGS ASSOCIATION OF SCHOOL BUSINESS OFFICIALS OF THE
UNITED STATES AND CANADA 41ST CONVENTION, CHICAGO, ILLINOIS, OCT.
16-20, 1955**

OC8 PAGES

**DESCRIPTORS- *RECREATIONAL FACILITIES, *SCHOOL MAINTENANCE, *
SCHOOL SAFETY**

**CONSIDERATION IS GIVEN TO PROBLEMS REGARDING THE MAINTENANCE
AND OPERATION OF STADIA FOR SCHOOL PURPOSES. (FS)**



Availability:

**George H. Bush
Purdue University
Fayette, Indiana 47907**

SCHOOL SITES SELECTION AND ACQUISITION

CONNECTICUT STATE DEPARTMENT OF EDUCATION, HARTFORD

PUBLISHED-JUN60

IN- SCHOOL BUILDING ECONOMY SERIES NO. 3

019 PAGES

DESCRIPTORS- *PHYSICAL ACTIVITIES, *PLANNING, *RECREATIONAL PROGRAMS, *SCHOOL LOCATION, *SCHOOL SIZE, ATHLETIC ACTIVITIES, COMMUNITY RECREATION PROGRAMS, PHYSICAL RECREATION PROGRAMS, SCHOOL PLANNING

BASIC CONSIDERATIONS, CRITERIA, AND PROCEDURES ARE PRESENTED REGARDING THE SELECTION AND ACQUISITION OF SCHOOL SITES. SPACE REQUIRED FOR COMMON OUTDOOR GAMES IS CONSIDERED, AND SUGGESTIONS ARE MADE REGARDING SPACE ALLOTMENTS FOR OUTDOOR PHYSICAL EDUCATION FACILITIES. (FS)

Availability:

**Connecticut State Department of Education
Hartford, Connecticut 06115**

SCHOOL SITE ANALYSIS AND DEVELOPMENT

CALIFORNIA STATE DEPARTMENT OF EDUCATION, SACRAMENTO, BUREAU OF
SCHOOL PLANNING

PUBLISHED- 66

043 PAGES

DESCRIPTORS- *PLAYGROUNDS, *RECREATIONAL FACILITIES, *SCHOOL
PLANNING, *SCHOOL LOCATION, *SITE SELECTION, ATHLETIC
ACTIVITIES, EDUCATIONAL FACILITIES, EDUCATIONAL NEEDS,
EDUCATIONAL PLANNING, EDUCATIONAL SPECIFICATIONS, PARKING AREAS,
PHYSICAL FACILITIES, PLAYGROUND ACTIVITIES, SCHOOL SIZE, SCHOOL
SPACE

THIS STUDY REPRESENTS A SEARCH FOR A SYSTEM OF DETERMINING
THE AMOUNT OF LAND REQUIRED TO CONDUCT THE EDUCATIONAL PROGRAMS
OFFERED BY THE CALIFORNIA PUBLIC SCHOOLS. DATA ARE CONTAINED IN
TABLES THAT PROVIDE A BASIS FOR DETERMINING THE SITE SIZE FOR A
SCHOOL THAT IS BEING DESIGNED TO SERVE A SPECIFIC ENROLLMENT SIZE
AND GRADE LEVEL RANGE. THE SITE FACTORS INCLUDED WERE--(1) LAND
FOR OUTDOOR PHYSICAL EDUCATION (2) DEVELOPED BUILDING SITE (3)
PARKING AND ACCESS ROADS (4) PERCENT FACTOR FOR LAYOUT. SITE
REQUIREMENT CATEGORIES INCLUDED WERE--(1) SMALL SCHOOLS (FEWER
THAN 7 CLASSROOMS) (2) ELEMENTARY GRADES (3) GRADES 7 THROUGH 9
(4) GRADES 9 THROUGH 12. SUPPORTING THIS DATA ARE DIAGRAMS OF
SPACE MODULES REPRESENTING THE VARIOUS FACILITY LAYOUTS. MODULE
COMBINATION DEPENDS ON THE VARIOUS ENROLLMENT SIZES GIVEN. TO
FACILITATE THIS ANALYSIS, A BRIEF SEQUENTIAL SITE PLAN
DEVELOPMENT PROCEDURE AND LIST OF ESSENTIAL SITE SURVEY DATA ARE
INCLUDED. (MH)

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PLAYGROUND FACILITIES FOR RURAL AND SMALL ELEMENTARY SCHOOLS

BY- CORNACCHIA, HAROLD J. AND NIXON, JOHN E.
STANFORD UNIVERSITY, CALIFORNIA, SCHOOL OF EDUCATION

PUBLISHED- 55
IN- EDUCATIONAL ADMINISTRATION, MONOGRAPH, NO. 4

50 PAGES

DESCRIPTORS- *ELEMENTARY SCHOOLS, *PHYSICAL EDUCATION,
*PLAYGROUNDS, *RURAL SCHOOLS, *SCHOOL DESIGN, ATHLETIC
ACTIVITIES, EQUIPMENT, SCHOOL LOCATION, SCHOOL PLANNING

THIS MONOGRAPH WAS WRITTEN TO DEAL WITH THE OBJECTIVES, ORGANIZATION, AND INSTRUCTIONAL REQUIREMENTS FOR PLAYGROUND EQUIPMENT AND ITS ARRANGEMENT IN THE EDUCATIONAL PROGRAM OF RURAL AND SMALLER ELEMENTARY SCHOOLS, WITH THE TRANSLATION INTO ACTUAL CONSTRUCTION AND OPERATIONAL TERMS FOR ARCHITECTS, SCHOOL PLANNERS, AND BUILDERS. ONE OF THE MAJOR CONCERNS IS THE DEMONSTRATION OF THE NEED FOR LARGER ELEMENTARY SCHOOL SITES IN SPECIFIC TERMS THROUGH THE PRESENTATION OF ACTUAL SPACE REQUIREMENTS OF VARIOUS PLAY AREAS NEEDED IN AN ADEQUATE PHYSICAL EDUCATION AND RECREATION PROGRAM FOR DIFFERENT SIZED SCHOOLS. SUBJECT HEADINGS INCLUDE--(1) THE IMPORTANCE OF ADEQUATE PLAYGROUNDS IN SMALL ELEMENTARY SCHOOLS, (2) CHARACTERISTICS OF AN ADEQUATE SCHOOL PLAYGROUND, (3) A DESIRABLE EDUCATION PROGRAM FOR ELEMENTARY SCHOOLS, (4) PLAYGROUND REQUIREMENTS FOR ONE AND TWO TEACHER ELEMENTARY SCHOOLS, (5) THREE AND FOUR TEACHER, (6) FIVE TO EIGHT TEACHER, AND (7) OTHER GENERAL CONSIDERATIONS. (MM)

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PLANNING YOUR PLAYGROUND

J. E. BURKE COMPANY, FOND DU LAC, WISCONSIN

041 PAGES

**DESCRIPTORS- *EQUIPMENT, *FACILITY GUIDELINES, * PLANNING,
*PLAYGROUNDS, *RECREATIONAL FACILITIES, HEALTH ACTIVITIES,
MAINTENANCE**

**THIS ARTICLE REVIEWS THE VALUE OF PLAYGROUND APPARATUS,
FACTORS IN SELECTION OF EQUIPMENT, AND CONSIDERATIONS IN PLANNING
PLAYGROUNDS. ALSO INCLUDED ARE SECTIONS ON TYPES OF PLAY DEVICES,
CONSTRUCTION OF PLAYGROUND APPARATUS, UNUSUAL PLAYGROUND
APPARATUS, CARE OF EQUIPMENT, SOURCES OF ACCIDENTS OR DANGERS ON
PLAYGROUNDS, AND EQUIPMENT SPACE REQUIREMENTS. ASSEMBLY,
ERECTION, AND FIELD PAINTING SUGGESTIONS ARE ALSO DISCUSSED.
HEALTHFUL EXERCISES FOR OUTDOOR GYM SETS AND SURFACING PLAY AREAS
ARE EXPLAINED. SEVERAL PLAYGROUND LAYOUT AND SPECIFICATION
DIAGRAMS ARE INCLUDED. (RK)**

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THE PREPARED ENVIRONMENT AND ITS RELATIONSHIP TO LEARNING

BY- LUEFFLER, MARGARET HOWARD

PUBLISHED- 68

AVAILABLE FROM- MARGARET HOWARD LUEFFLER, DIRECTOR, PRIMARY
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031 PAGES

DESCRIPTORS- *DESIGN NEEDS, *EARLY CHILDHOOD EDUCATION,
*EDUCATIONAL EQUIPMENT, *LEARNING, *SCHOOL ENVIRONMENT, *CARRELS,
CLASSROOM DESIGN, FURNITURE DESIGN, INDIVIDUAL NEEDS,
PLAYGROUNDS, PLAY THERAPY, SCHOOL DESIGN

A PROPOSAL TO CAREFULLY EXAMINE SOME CURRENT THINKING ON
EARLY LEARNING AND ATTEMPTS TO PROJECT THEIR IMPLICATIONS INTO
THE DESIGN OF A UNIQUE LEARNING FACILITY THAT WOULD OFFER A
SUPPORTIVE AND STIMULATING ENVIRONMENT FOR YOUNG CHILDREN TWO TO
SIX YEARS OF AGE, PROVIDING FOR THEIR INDIVIDUAL NEEDS AND
DIFFERENCES. THE CONCEPTS EXAMINED WERE SELECTED BECAUSE IT WAS
FELT THAT WITHIN THEIR BROAD FRAMEWORK COULD BE INCLUDED A WIDE
AND VARIED RANGE OF SUBJECT MATTER THAT SEEMED TO BE RELEVANT TO
EARLY LEARNING AND FACILITY DESIGN. THE IDEAS PRESENTED SHOULD
STIMULATE THE THINKING OF ALL THOSE CONCERNED WITH THE EDUCATION
OF THE VERY YOUNG. INCLUDED ARE SECTIONS ON--(1) DEPENDENCE,
INDEPENDENCE, INTERDEPENDENCE, (2) EARLY STIMULATION AND
LEARNING, (3) MANAGEABLE COMPLEXITY, (4) THE PLAY OF YOUNG
CHILDREN, AND (5) THE ROLE OF THE TEACHER. (RK)

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ASSOCIATION FOR SUPERVISION AND CURRICULUM DEVELOPMENT,
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PUBLISHED- 58

082 PAGES

**DESCRIPTORS- *CURRICULUM, *ELEMENTARY SCHOOLS, *PHYSICAL
FACILITIES, *EDUCATIONAL PLANNING, EDUCATIONAL FACILITIES,
PLANNING, SCHOOL PLANNING, BUILDING DESIGN, ACOUSTICAL
ENVIRONMENT, PLAYGROUNDS, FACILITY UTILIZATION RESEARCH**

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JEFFERSON COUNTY BOARD OF EDUCATION, LOUISVILLE, KENTUCKY

PUBLISHED-MAY65

684 PAGES

DESCRIPTORS- *EDUCATIONAL SPECIFICATIONS, *ELEMENTARY SCHOOLS, *FACILITY GUIDELINES, *SCHOOL PLANNING, *SPACE UTILIZATION, CLASSROOMS, CURRICULUM, DINING FACILITIES, EDUCATIONAL OBJECTIVES, EQUIPMENT, FURNITURE, HANDICAPPED, HEALTH FACILITIES, PLAYGROUNDS

A GUIDE FOR PLANNING ELEMENTARY SCHOOL FACILITIES DESIGNED TO AID ARCHITECTS AND SCHOOL STAFF WHEN INTERPRETING THE NEEDS OF CHILDREN AND THE SCHOOL PROGRAM IN RELATION TO SPACE, ARRANGEMENT, AND FACILITIES. GENERAL INFORMATION REGARDING SCHOOL PLANNING, EDUCATIONAL OBJECTIVES, CURRICULUM, AND INSTRUCTION TO ARCHITECTS IS CONTAINED. VARIOUS KINDS OF SPACE, FACILITIES, FURNITURE, AND EQUIPMENT NEEDED FOR THE FOLLOWING AREAS ARE DESCRIBED--(1) GENERAL OFFICE, PRINCIPALS OFFICE, CONFERENCE ROOM, MIMEOGRAPH ROOM, BOOK STORE, HEALTH ROOM, VAULT AND TEACHERS LOUNGE AND WORK ROOM, (2) CLASSROOMS FOR PRIMARY, MIDDLE AND UPPER GRADES, (3) OTHER INSTRUCTIONAL AREAS, SUCH AS SPECIAL EDUCATION, PHYSICALLY HANDICAPPED, HEARING HANDICAPPED, SPEECH CORRECTION, EDUCABLE MENTALLY HANDICAPPED, TRAINABLE MENTALLY HANDICAPPED, CORRECTIVE READING, MUSIC ROOM, TV CLASSROOM, TV WORK AND CONFERENCE ROOMS, LIBRARY, LIBRARY WORK ROOM, MATERIALS CENTER, PHYSICAL EDUCATION ROOM, BLACKTOP PLAY AREA, AND PRIMARY AND UPPER GRADE PLAYGROUNDS, AND (4) UTILITY AREAS SUCH AS LUNCHROOMS, KITCHEN, REFRIGERATED STORAGE, DRY STORAGE ROOM, OFFICE AREA, DRESSING ROOM AND RESTROOM, MECHANICAL ROOM, AND OTHER CUSTODIAL STORAGE. SEPARATE SECTIONS INCLUDE LIGHTING AND THE RELATIONSHIP OF SCHOOL SITE TO BUILDING AND LOCATION, WALKS AND DRIVES, PARKING AREAS, GRADING, LANDSCAPING, AND FENCING. (RK)

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CREATIVE PLAYGROUNDS AND RECREATION CENTERS

BY - LEDERMANN, ALFRED; AND TRACHSEL, ALFRED

PUBLISHED - 1968

**DESCRIPTORS - *EQUIPMENT; *PHYSICAL EDUCATION FACILITIES; *PLANNING;
*PLAYGROUNDS; *RECREATIONAL FACILITIES; DESIGN PREFERENCES; PARKS;
PHYSICAL FACILITIES; PHYSICALLY HANDICAPPED**

THIS COMPREHENSIVE GUIDEBOOK (WRITTEN IN BOTH ENGLISH AND GERMAN) PERTAINS TO VARIOUS ASPECTS OF PLANNING AND DESIGNING PLAYGROUNDS AND COMMUNITY CENTERS. THE INTRODUCTORY CHAPTER DISCUSSES THE EDUCATIONAL AND FORMATIVE ASPECTS OF PLAYGROUNDS, CITY PLANNING PREREQUISITES, AND THE EFFECTS OF SOCIOLOGICAL CONDITIONS BEFORE INITIAL PLANNING IS BEGUN. THE MAIN BODY TREATS TRADITIONAL CHILDREN'S PLAYGROUNDS, GROUPED ACCORDING TO TYPE, AND LEISURE CENTERS FOR YOUNG AND OLD. MANY OF THE LATEST EXAMPLES ARE INCLUDED, PARTICULARLY THOSE FROM THE UNITED STATES. SPECIAL PROJECTS SUCH AS THERAPEUTIC PLAYGROUNDS FOR CHILDREN'S HOSPITALS ARE ILLUSTRATED, AS WELL AS EXPERIMENTAL SCHOOLYARDS. A SECTION IS ALSO INCLUDED ON PLAYGROUND EQUIPMENT, WITH SPECIAL EMPHASIS GIVEN TO STRUCTURES THAT STIMULATE THE CREATIVE IMAGINATION OF THE CHILD. PHOTOGRAPHS AND DIAGRAMMATIC REPRESENTATIONS ARE PRESENTED THROUGHOUT. (FS)

Availability:

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ASPHALT PAVED RUNNING TRACKS

ASPHALT INSTITUTE NORTHERN DIVISION, SAINT PAUL, MINN.

REPORT/SERIES NO.- M-236

040 PAGES

**DESCRIPTORS- *ASPHALT, *ATHLETIC FIELDS, *BUILDING MATERIALS,
*FACILITY CASE STUDIES, *PHYSICAL EDUCATION**

THE INCREASING INTEREST AND MORE WIDESPREAD CONSTRUCTION OF ALL-WEATHER HIGH SCHOOL AND COLLEGE RUNNING TRACKS HAVE RESULTED IN NUMEROUS INQUIRIES FOR INFORMATION ABOUT ASPHALT PAVED RUNNING TRACKS. THE ASPHALT INSTITUTE HAS NO SPECIFIC PUBLICATION, SPECIFICATIONS, OR RECOMMENDATIONS ON THE SUBJECT. TO ANSWER SUCH REQUESTS, THEREFORE, A COMPILATION OF VARIOUS INSTALLATIONS AND PERTINENT INFORMATION HAS BEEN PREPARED AND IS CONTAINED IN THIS REPORT. THE BROAD CLASSIFICATION OF ASPHALT RUNNING TRACKS DISCUSSED ARE AS FOLLOWS--(1) GRASSTEX, (2) RUBBER PARTICLE ASPHALT HOT MIX (BLUE), (3) LATEX ASPHALT HOT MIX (WHITE), AND (4) CONVENTIONAL SHEET AND SAND-ASPHALT HOT MIX (BUFF). THESE RUNNING TRACKS MAY BE EITHER INDOOR OR OUTDOOR. IN ADDITION, THE FOLLOWING TWO SECTIONS ARE ALSO INCLUDED--'GRASSTEX TRACKS...NOW IN COLOR,' AND 'CONSTRUCTION OF A RUBBER-ASPHALT TRACK.' (RK)

Availability:

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LAYKOLD-ASPHALT SPECIALTIES

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**DESCRIPTORS- *ATHLETIC FACILITIES, *BUILDING MATERIALS,
*RECREATIONAL FACILITIES, ATHLETIC ACTIVITIES, PHYSICAL
EDUCATION, RECREATIONAL ACTIVITIES**

**DETAILED SPECIFICATIONS ARE GIVEN FOR CHEVRON ASPHALT
MATERIALS WITH RESPECT TO RUNNING TRACKS. AREAS DISCUSSED
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CLEANING, (4) MIXING, (5) LINES FOR LANE MARKING, (6) APPLICATION
RATE, (7) FORMULATION, (8) CURBS, (9) SLOPES, (10) TABULATION OF
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(13) DRYING. (JT)**

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**BY- BENNETT, THOMAS C.
WISCONSIN UNIVERSITY, MADISON, REGENTS**

089 PAGES

**DESCRIPTORS- *PHYSICAL EDUCATION FACILITIES, *ATHLETICS,
*RECREATIONAL FACILITIES, *TRACK, EDUCATIONAL FACILITIES**

**INFORMATION IS PRESENTED REGARDING THE CONSTRUCTION OF ALL-
WEATHER RESILIENT SURFACING FOR TRACK AND FIELD. THE DIFFERENT
KINDS OF SURFACES AND HOW THEY ARE CONSTRUCTED AND THE PROBABLE COSTS
ARE MADE AVAILABLE IN THIS ISSUE. IN ADDITION, PLANNING, MAINTENANCE,
AND MANY TIPS AND SUGGESTIONS ARE PRESENTED TO HELP MAKE IT EASIER TO
BUILD A TRACK. PHOTOGRAPHS AND DIAGRAMMATIC REPRESENTATIONS ARE
INCLUDED THROUGHOUT. (FS)**

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ASPHALT PAVING CAMPUS ROADS AND SIDEWALKS

PUBLISHED-JAN67

003 PAGES

**DESCRIPTORS- *BUILDING MATERIALS, *CONSTRUCTION COSTS,
*CONSTRUCTION INDUSTRY, *PARKING FACILITIES, *PEDESTRIAN TRAFFIC,
ANCILLARY SERVICES, PHYSICAL EDUCATION FACILITIES, SPEECHES,
TRAFFIC CIRCULATION**

MISAPPLICATION OF ASPHALT IN PAVING AND GUTTERING HAS BEEN THE CAUSE OF MISTAKEN BELIEFS CONCERNING THE DURABILITY OF ASPHALT AS A CONSTRUCTION MATERIAL FOR ROADS, SIDEWALKS, GUTTERS, AND ATHLETIC FACILITIES. PROPER SUBGRADE CONSTRUCTION, FORMING, AND COMPACTION WILL GIVE ASPHALT AS GREAT LONGEVITY AS OTHER TYPES OF CONSTRUCTION MATERIALS. THE PROPER CHOICE OF COLD OR HOT ASPHALT MIXES IS GOVERNED BY THE WEIGHT AND VOLUME OF INTENDED TRAFFIC. COLD MIXES LAST LONGER UNDER LOW TRAFFIC VOLUMES. NEW USES AND APPLICATION METHODS WERE DISCUSSED. PARTICULAR STRESS WAS GIVEN TO NEW APPLICATION EQUIPMENT NOW AVAILABLE WHICH EXTENDS THE LIFE OF ASPHALT CONSTRUCTED FACILITIES. (RLP)

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ASPHALT INSTITUTE, COLLEGE PARK, MARYLAND

PUBLISHED-MAY65

IN- MANUAL SERIES NO. 9 (MS-9)

039 PAGES

**DESCRIPTORS- *BUILDING MATERIALS, *CONSTRUCTION (PROCESS),
*PARKING AREAS, *PHYSICAL EDUCATION, *PLAYGROUNDS, DESIGN NEEDS,
MAINTENANCE**

**THIS PAMPHLET DISCUSSES THE ALTERNATIVE METHODS,
APPLICATIONS, AND TECHNICAL CONSIDERATIONS FOR OFF-STREET PAVING
AND PLAY AREAS. OFF-STREET PAVING INCLUDES--(1) ASPHALT-PAVED
PARKING AREAS, (2) ROOF DECK PARKING AREAS, (3) ASPHALT-PAVED
DRIVEWAYS, (4) ASPHALT-PAVED SERVICE STATION LOTS, AND (5)
SIDEWALKS. THE DISCUSSION OF PLAY AREAS INCLUDES--(1)
PLAYGROUNDS, (2) TENNIS COURTS, AND (3) ASPHALT SWIMMING POOLS.
SUGGESTIONS ARE GIVEN IN EACH AREA FOR SITE PREPARATION,
DRAINAGE, ASPHALT MIXTURE, THICKNESS, BASE COURSE, AND SURFACE
TREATMENT. A REFERENCE LIST IS GIVEN OF OTHER ASPHALT SOURCE
BOOKS. (MM)**

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THE ASPHALT INSTITUTE, COLLEGE PARK, MARYLAND

PUBLISHED-SEP65

004 PAGES

DESCRIPTORS- *BUILDING MATERIALS, *SITE DEVELOPMENT, ASPHALTS, DRIVEWAYS, PARKING AREAS, PLAYGROUNDS

SPECIFICATIONS FOR THICKNESSES AND MATERIALS ARE GIVEN FOR VARIOUS PAVEMENT CLASSIFICATIONS. CONSTRUCTION RECOMMENDATIONS ARE GIVEN FOR--(1) ASPHALT CONCRETE SURFACE, (2) HOT-MIX ASPHALT BASE, (3) TOTAL COMPACTED GRADE, AND (4) SURFACE DRESSING. PAVEMENT USES CONSIDERED ARE--(1) SERVICE ROADS OR DRIVES, (2) PARKING AREAS, AND (3) PLAYGROUNDS. (MH)

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ARTIFICIAL TURF IS GROWING IN POPULARITY FOR ATHLETIC FIELDS

BY - GUTMAN, JAMES

PUBLISHED - SEPTEMBER 1969

IN - COLLEGE AND UNIVERSITY BUSINESS; V47 N3 P92-104 SEPTEMBER 1969

006 PAGES

DESCRIPTORS - *ATHLETIC FIELDS; *PHYSICAL EDUCATION FACILITIES; *TURF
MANAGEMENT; ATHLETIC EQUIPMENT; FIELD HOUSES

SEVERAL SALIENT ISSUES ARE EXAMINED IN REGARD TO THE USE OF ARTIFICIAL TURF FOR ATHLETIC FIELDS. INITIAL INSTALLATION COSTS ARE DISCUSSED AS ARE DIRECT AND INDIRECT ECONOMIC ADVANTAGES AFFORDED BY THE USE OF ARTIFICIAL TURF. ADVANTAGES AND DISADVANTAGES OF ARTIFICIAL TURF ARE CONSIDERED INCLUDING SOME COMPARISONS BETWEEN THE PRINCIPAL PRODUCTS IN USE (TARTAN, ASTROTURF, AND GRASSTEX). FIELD MARKING AND TURF MAINTNANCE PROBLEMS ARE EXAMINED; SEVERAL POINTS ARE EXEMPLIFIED BY REFERRING TO ATHLETIC FIELDS IN WHICH ARTIFICIAL TURF IS NOW IN USE. COMMENTS BY STADIUM MANAGERS ARE INCLUDED. (FS)

Availability:

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GOODBYE TO THREE YARDS AND A CLOUD OF DUST

BY - JOHNSON, WILLIAM

PUBLISHED - JANUARY 1969

IN - SPORTS ILLUSTRATED; V30 N4 P37-39 JANUARY 27, 1969

003 PAGES

DESCRIPTORS - *ATHLETIC FIELDS; *LAND USE; *TURF MANAGEMENT; ATHLETIC EQUIPMENT

PROS AND CONS OF ARTIFICIAL TURF FOR FOOTBALL FIELDS ARE DISCUSSED. CONSIDERATION IS GIVEN TO OVERALL ECONOMIC, SAFETY, AND PERFORMANCE FEATURES OF SYNTHETIC TURF AND TO STRUCTURAL DETAILS OF SEVERAL DIFFERENT COMPANIES' TURF. COMMENTS BY NOTED COACHES, PLAYERS, AND OFFICIALS ARE INCLUDED. (FS)

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CHICAGO ATHLETIC INSTITUTE, ILLINOIS

**PUBLISHED- 05
IN- REV. 1965**

280 PAGES

DESCRIPTORS- *PHYSICAL EDUCATION, *PHYSICAL FACILITIES, *PLANNING, *RECREATIONAL FACILITIES, ATHLETIC ACTIVITIES, ATHLETIC PROGRAMS, ATHLETICS FACILITIES, HEALTH, HEALTH CONDITIONS, PHYSICAL RECREATION PROGRAMS, PLAYGROUNDS, RECREATIONAL ACTIVITIES

SPECIFIC INFORMATION IS PROVIDED IN THIS GUIDE TO PLANNERS OF AREAS AND FACILITIES FOR ATHLETICS, RECREATION, OUTDOOR EDUCATION, AND PHYSICAL AND HEALTH EDUCATION. PART ONE CONCERNS BASIC CONCEPTS PERTINENT TO THE AREA OF CONSIDERATION. THE AIMS OF PHYSICAL EDUCATION HEALTH AND SAFETY EDUCATION, AND RECREATION ARE LISTED. PLANNING PRINCIPLES, PLANNING UNITS, AND AREA TYPES ARE DISCUSSED. PART TWO DEALS WITH OUTDOOR AREAS AND FACILITIES. PLANNING TECHNIQUES ARE OUTLINED. SPECIFIC GUIDELINES FOR DEVELOPING RECREATION, PARK, SCHOOL, OUTDOOR, AND OUTDOOR EDUCATION AREAS ARE GIVEN. PART THREE IS CONCERNED WITH INDOOR FACILITIES. THE DISCUSSION IS BROKEN INTO ELEMENTARY AND SECONDARY SCHOOLS, COLLEGES AND UNIVERSITIES, RECREATION BUILDINGS, AND GENERAL BUILDING FEATURES. PART FOUR PERTAINS TO AQUATIC AREAS AND FACILITIES. DESIGN AND CONSTRUCTION OF SWIMMING POOLS ARE CONSIDERED FROM A TECHNICAL VIEWPOINT. DEVELOPMENT OF WATERFRONTS AND BEACHES IS ALSO DISCUSSED. PART FIVE DEALS WITH HEALTH AND SAFETY AREAS AND FACILITIES. FACILITY NEEDS RELATED TO THE SCHOOL HEALTH PROGRAM IN THE LIGHT OF THE SCHOOL'S PLACE IN THE COMMUNITY ARE DISCUSSED IN ONE CHAPTER AND SAFETY EDUCATION AREAS DEALING WITH DRIVER EDUCATION ARE DISCUSSED IN THE OTHER. THROUGHOUT THIS GUIDE SPECIFIC INFORMATION IS GIVEN TO GUIDE THE READER. SEVERAL APPENDICES INCLUDE INFORMATION ABOUT THE NATIONAL CONFERENCE ON AREAS AND FACILITIES FOR HEALTH, PHYSICAL EDUCATION, AND RECREATION. SPECIFIC DIAGRAMS OF VARIOUS TYPES OF ATHLETIC COURTS, RULES SOURCES, REQUIREMENTS OF THE AGING AND DISABLED, CHECK LISTS FOR PLANNERS, AND A GLOSSARY. COPIES OF THIS DOCUMENT MAY BE OBTAINED FROM THE ATHLETIC INSTITUTE, MERCHANDISE MART, CHICAGO, ILLINOIS 60654, OR FROM AMERICAN ASSOCIATION FOR HEALTH, PHYSICAL EDUCATION, AND RECREATION, 1201 18TH STREET, N.W., WASHINGTON, D.C. 20036. (RH)

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A GUIDE FOR PLANNING PHYSICAL EDUCATION AND ATHLETIC FACILITIES, REV. 1964

NEW JERSEY, STATE DEPARTMENT OF EDUCATION, TRENTON

PUBLISHED - 1964

050 PAGES

DESCRIPTORS - *ATHLETIC EQUIPMENT; *ATHLETIC FIELDS; *GYMNASIUMS; *PHYSICAL EDUCATION FACILITIES; *RECREATIONAL FACILITIES; ATHLETIC ACTIVITIES; EDUCATIONAL FACILITIES; FIELD HOUSES; LOCKER ROOMS; PHYSICAL FACILITIES; SCHOOL SPACE

THIS STUDY EXAMINES PHYSICAL EDUCATION FACILITIES, THEIR PHYSICAL NEEDS, AND RELATED DESIGN CONSIDERATIONS. A SYSTEM OF DETERMINING THE TOTAL NUMBER OF TEACHING STATIONS NEEDED IS GIVEN TO AID INITIAL REQUIREMENT ANALYSIS. INDOOR FACILITIES ANALYZED INCLUDE--(1) THE GYMNASIUM, IN TERMS OF LOCATION, SIZE, DESIGN FEATURES, AND RELATED COMPONENTS, (2) AUXILIARY TEACHING ROOMS WHICH PROVIDE TEACHING STATIONS FOR SPECIALIZED FUNCTIONS, (3) LOCKER AND SHOWER ROOMS INCLUDING SUPPORTING FACILITIES AND DETAILS, AND (4) OFFICES FOR SUPERVISORY FUNCTIONS. PLANNING FACTORS FOR OUTDOOR FACILITIES INCLUDE LOCATION, SUPERVISORY CONTROL, SAFETY, UTILITY, SURFACING REQUIREMENTS, AND SPECIALIZED EQUIPMENT. REQUIREMENTS FOR INTER-SCHOLASTIC ATHLETICS AND RECREATIONAL FACILITIES ARE LISTED IN TERMS OF STORAGE AND USAGE REQUIREMENTS, WHILE IMPORTANT GENERAL FACTORS FOR FIELD HOUSE AND ATHLETIC FIELD DESIGN ARE GIVEN. A CHECKLIST FOR FACILITIES PLANNING IS INCLUDED TO HELP ELIMINATE COMMON ERRORS MADE IN DESIGN AND CONSTRUCTION. (MH)

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CAMPUS PLANNING

BY- DOBEK, RICHARD P.

PUBLISHED- 63

324 PAGES

**DESCRIPTORS- *CAMPUSES, *COLLEGE BUILDINGS, *COLLEGE PLANNING,
*SCHOOL DESIGN, PLANNING, EDUCATIONAL COMPLEXES, SCHOOL
BUILDINGS, SCHOOL PLANNING, MODULES, PLANNING MODULES,
FACILITIES, EDUCATIONAL FACILITIES, INSTITUTIONAL FACILITIES,
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ACTIVITIES, PARKING AREAS, DESIGN, BUILDING DESIGN**

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FACILITIES FOR PHYSICAL FITNESS

BY- MUSIAL, STAN

PUBLISHED-MAY65

IN- AMERICAN SCHOOL AND UNIVERSITY, MAY 65, PP. 53-56

3 PAGES

DESCRIPTORS- *FACILITY UTILIZATION RESEARCH, *PHYSICAL DEVELOPMENT, *PHYSICAL EDUCATION, *PLANNING, ATHLETIC ACTIVITIES, CURRICULUM PLANNING, PHYSICAL ACTIVITIES, PHYSICAL FITNESS, PHYSICAL RECREATION PROGRAMS, RECREATIONAL ACTIVITIES , SCHOOL PLANNING

THIS ARTICLE CITES THE LOW PRIORITY THAT PHYSICAL EDUCATION GENERALLY HAS IN CURRICULUM AND SCHOOL FACILITY PLANNING. IT ALSO CITES THE REASONS FOR DEVELOPING MORE ADEQUATE PHYSICAL EDUCATION FACILITIES--(1) OUR WAY OF LIFE NO LONGER PROVIDES VIGOROUS PHYSICAL ACTIVITY NECESSARY FOR HEALTHY DEVELOPMENT, (2) A DIRECT RELATIONSHIP EXISTS BETWEEN PHYSICAL FITNESS AND ACADEMIC AND SOCIAL PERFORMANCE, AND (3) INCREASED LEISURE TIME REQUIRES THAT PEOPLE BE PREPARED TO USE IT ENJOYABLY AND CONSTRUCTIVELY. THE ARTICLE INCLUDES RECOMMENDATIONS FOR FACILITIES FOR A HIGH SCHOOL PHYSICAL EDUCATION PROGRAM--BOYS AND GIRLS GYMNASIUMS WITH APPARATUS AND EXERCISE ROOMS, A SWIMMING POOL, PLAYING FIELDS, COURTS AND HARD SURFACE AREAS, AN OUTDOOR RECREATION AREA, AN OBSTACLE COURSE, ATHLETIC FACILITIES FOR WELL-ROUNDED INTRAMURAL AND VARSITY PROGRAMS, AND ADEQUATE LOCKER AND SHOWER FACILITIES. CITED AS AN EXAMPLE IS THE SPACE AND FACILITIES REQUIREMENTS FOR A PHYSICAL EDUCATION PROGRAM SET UP BY THE STATE DEPARTMENT OF EDUCATION OF CALIFORNIA. PHYSICAL EDUCATION FACILITIES SHOULD BE USED DURING EVENINGS, ON WEEKENDS, AND DURING THE SUMMER MONTHS. THE ARTICLE RECOMMENDS THAT PHYSICAL EDUCATION FACILITIES BE PLANNED FOR INSTRUCTION, SCHOOL RECREATION AND COMMUNITY USE. THIS ARTICLE APPEARED IN THE MAY, 1965 ISSUE OF AMERICAN SCHOOL AND UNIVERSITY. COPIES MAY BE OBTAINED FROM ARNOLD BLOOM, EDITOR, BUTTENHEIM PUBLISHING CORP., 757 THIRD AVENUE, NEW YORK, N.Y. 10017. (GM)

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RESEARCH COUN. OF GREAT CITIES PROG. FOR SCH. IMPROV., CHICAGO, ILL.

049 PAGES

DESCRIPTORS- *ARCHITECTURAL PROGRAMING, *CLUSTER GROUPING, *HIGH SCHOOL DESIGN, *SCHOOL BUILDINGS, *SCHOOL CONSTRUCTION, ATHLETIC FIELDS, EDUCATIONAL DEMAND, EDUCATIONAL PARKS, HIGH SCHOOL CURRICULUM, HIGH SCHOOLS, INSTRUCTIONAL INNOVATION, SCHOOL LOCATION

WESTERN HIGH SCHOOL IN WASHINGTON D. C. FIRST OPENED ITS DOORS IN 1890. IT IS STILL A STRUCTURALLY SOUND BUILDING BUT CANNOT, AS IT IS PRESENTLY DESIGNED, HOPE TO FULFILL THE EDUCATIONAL PROGRAMS OF THE 1970S. DEMANDS FOR CHANGE HAVE COME FROM STUDENTS, FACULTY, PARENTS, AND THE COMMUNITY AT LARGE. AS ENVISAGED, THE NEW PROGRAM WOULD BE AN INQUIRY OR PROBLEM-SOLVING APPROACH TO EDUCATION USING A SERIES OF THREE OR FOUR CLUSTERS OF CLASSROOMS, SEMINAR ROOMS, INDEPENDENT STUDY AREAS, AND FACULTY OFFICES TO HOUSE THE PROGRAM. TEN DIFFERENT ALTERNATIVE ARCHITECTURAL SOLUTIONS ARE OFFERED RANGING FROM MINOR ALTERATIONS TO THE PRESENT BUILDING TO THE CONSTRUCTION OF AN EDUCATIONAL PARK. PLANS AND SCHEMATIC DIAGRAMS ARE PICTURED FOR EACH OF THE SCHEMES. ROUGH COST ESTIMATES ARE GIVEN AND SPACE NEEDS FOR EACH PART OF THE EDUCATIONAL PROGRAMS CHARTED. ALSO INCLUDED ARE THEN AND NOW PHOTOGRAPHS OF THE EXTERIOR AND RECENT PHOTOGRAPHS OF THE INTERIOR OF THE SCHOOL BUILDING. BASIC TO ALL OF THE ALTERNATIVES CONSIDERED IS THE CONVERSION, NOT THE REPLACEMENT, OF THE PRESENTLY EXISTING FACILITY. (NI)

Order from EDRS as: ED 25918

MF \$0.25

HC \$2.55

1961-1968 NEW CONSTRUCTION REPORT

NATIONAL ASSOCIATION OF PHYSICAL PLANT ADMINISTRATORS, RICHMOND, INDIANA

PUBLISHED - MARCH 1968

065 PAGES

DESCRIPTORS - *COMPARATIVE STATISTICS; *CONSTRUCTION COSTS; *HIGHER EDUCATION; *SPACE CLASSIFICATION; *SURVEYS; ANCILLARY SERVICES; AUDITORIUMS; CLASSROOMS; DORMITORIES; LABORATORIES; LIBRARIES; MEDICAL SCHOOLS; PARKING FACILITIES; PHYSICAL EDUCATION FACILITIES; STUDENT UNIONS

137 NAPPA COLLEGES AND UNIVERSITIES PROVIDED DATA FOR THIS SUMMARY. PROJECTS ARE SUMMARIZED BY THIRTEEN BUILDING CLASSIFICATIONS. UNDER EACH CLASSIFICATION THE FOLLOWING INFORMATION HEADINGS ARE USED--(1) NAME OF INSTITUTION, (2) PROJECT COMPLETION DATE, (3) GROSS SQUARE FEET, (4) NET ASSIGNABLE AREA, (5) CONSTRUCTION COSTS, (6) NUMBER OF STORIES, (7) TYPE OF CONSTRUCTION-STRUCTURAL STEEL FRAME, REINFORCED CONCRETE FRAME, LOAD BEARING MASONRY, AND WOOD FRAME, AND (8) PRIMARY FUNCTION HOUSED AND CAPACITY. THE APPENDIX CONTAINS DEFINITIONS OF THE CENTRAL TERMS USED--GROSS AREA, NET AREA, AND ASSIGNABLE AREA. (RLP)

Availability:

**National Association of Physical Plant Administrators
c/o John H. Sweitzer
Earlham College
Richmond, Indiana 47374**

SPACE GUIDELINES FOR PHYSICAL EDUCATION

WISCONSIN COORDINATING COMMITTEE FOR HIGHER EDUCATION, MADISON

PUBLISHED-MAR66

REPORT/SERIES NO.- CCHE-17

004 PAGES

DESCRIPTORS- *ATHLETIC FIELDS, *FACILITY GUIDELINES, *FACILITY REQUIREMENTS, *HIGHER EDUCATION, *PHYSICAL EDUCATION FACILITIES, ATHLETIC ACTIVITIES, PHYSICAL EDUCATION, PHYSICAL RECREATIONAL ACTIVITIES, SPACE CLASSIFICATION, SPACE UTILIZATION

A PROCEDURE FOR DEVELOPING SPACE GUIDELINES FOR PHYSICAL EDUCATION ACTIVITIES IS PRESENTED. THE RESULTS OF A QUESTIONNAIRE FROM TWO WISCONSIN STATE UNIVERSITIES SUGGESTS THAT THE INDOOR AND OUTDOOR SPACE REQUIREMENTS OF THE 1960 ILLINOIS STUDY SATISFY MINIMAL NEEDS FOR PHYSICAL EDUCATION ACTIVITIES. SUGGESTED GUIDELINES FOR INDOOR AND OUTDOOR PHYSICAL EDUCATION SPACE NEEDS BASED ON STUDENT ENROLLMENT ARE GIVEN. (HH)

Availability:

Wisc. Coord. Council for Higher Educ.
732 N. Midvale Blvd.
Madison, Wisconsin 53703

SPACE GUIDELINES FOR PHYSICAL EDUCATION (SUPPLEMENTARY GUIDELINES FOR ACADEMIC MAJORS)

**WISCONSIN COORDINATING COMMITTEE FOR HIGHER EDUCATION, MADISON
PUBLISHED-MAY66**

REPORT/SERIES NO.- CCHE-34

002 PAGES

DESCRIPTORS- *ATHLETIC FIELDS, *FACILITY GUIDELINES, *FACILITY REQUIREMENTS, *HIGHER EDUCATION, *PHYSICAL EDUCATION FACILITIES, ATHLETIC FACILITIES, COLLEGE MAJORS, PHYSICAL EDUCATION, SPACE CLASSIFICATION, SPACE UTILIZATION

**GUIDELINES FOR PHYSICAL EDUCATION ON CAMPUSES WHERE STUDENTS PURSUE A CURRICULUM LEADING TO ACADEMIC DEGREES IN PHYSICAL EDUCATION IS PRESENTED. THE GUIDELINE DEVELOPED IS BASED ON ACTIVITY HOURS PER WEEK, SQUARE FEET PER ACTIVITY FACILITY, STUDENTS PER ACTIVITY FACILITY, HOURS PER WEEK AND STATION USE.
(HH)**

Availability:

**Wisc. Coord. Council for Higher Educ.
732 N. Midvale Blvd.
Madison, Wisconsin 53703**

FACILITIES FOR PHYSICAL EDUCATION

FLORIDA STATE DEPARTMENT OF EDUCATION, TALLAHASSEE

PUBLISHED- 54

REPORT/SERIES NO.- BULL-13A

074 PAGES

DESCRIPTORS- *ATHLETIC PROGRAMS, *PHYSICAL EDUCATION, *PHYSICAL EDUCATION FACILITIES, *PHYSICAL FACILITIES, *RECREATIONAL FACILITIES, ATHLETIC ACTIVITIES, CLASSROOMS, EDUCATIONAL FACILITIES, EDUCATIONAL PLANNING, EQUIPMENT STORAGE, EXTRAMURAL ATHLETIC PROGRAMS, GYMNASIUMS, HEATING, INTRAMURAL ATHLETIC PROGRAMS, LIGHTING, OUTDOOR EDUCATION, SCHOOL DESIGN, SCHOOL PLANNING, SCHOOL SITE, SITE DEVELOPMENT, SITE PLANNING, TRACT, TREES, VENTILATION

THIS BOOKLET PROVIDES SPECIFIC GUIDES FOR THE PLANNING AND CONSTRUCTION OF INDOOR AND OUTDOOR PHYSICAL EDUCATION FACILITIES. FOLLOWING A PRESENTATION OF SOME OF THE MORE PERTINENT PRINCIPLES OF SCHOOLHOUSE PLANNING, DETAILED GUIDELINES ARE PRESENTED FOR PHYSICAL EDUCATION FACILITIES (SHOWER AND DRESSING FACILITIES, SWIMMING POOLS, INDOOR PLAY AREAS, OUTDOOR PLAY AREAS). CERTAIN MINIMUM AND MAXIMUM STANDARDS ARE SUGGESTED, BUT EMPHASIS IS GIVEN TO THE CHARACTERISTICS OF THE VARIOUS MATERIALS OR TYPES OF ARRANGEMENTS.(FS)

Availability:

**Florida State Department of Education
Tallahassee, Florida 32304**

PHYSICAL EDUCATION (ELEMENTARY SCHOOLS FACILITIES AND BASIC EQUIPMENT, 1965)

MASSACHUSETTS SCHOOL BUILDINGS ASSISTANCE COMMISSION, BOSTON

PUBLISHED- 65

012 PAGES

DESCRIPTORS- *ELEMENTARY SCHOOLS, *EQUIPMENT, *GYMNASIUMS,
*PHYSICAL EDUCATION FACILITIES, PHYSICAL EDUCATION, PLAYGROUNDS

THIS REPORT IS AN OUTLINE OF RECOMMENDED SPECIFICATIONS FOR THE ELEMENTARY SCHOOL PHYSICAL EDUCATION PROGRAM. THE INDOOR PHYSICAL EDUCATION FACILITY (GYMNASIUM) SHOULD BE LOCATED AWAY FROM THE CLASSROOM AREA AND READILY ACCESSIBLE TO OUTSIDE PLAY AREAS. THE SIZE OF THE GYMNASIUM SHOULD BE DETERMINED BY THE NUMBER AND SIZE OF THE CLASSES THAT USE IT. THE FLOOR, WALLS AND CEILING SHOULD BE CONSTRUCTED OF DURABLE MATERIALS. MOVABLE PARTITIONS MAY BE DESIRABLE FOR MULTIPLE CLASS USE OF THE GYMNASIUM. NON-GLARE, SHADOW-FREE LIGHTING SHOULD BE PROVIDED. THE LOCKER ROOM IS TO BE EQUIPPED WITH ADEQUATE DRAINAGE AND VENTILATION, FULL LENGTH LOCKERS IN OUTSIDE WALLS, COVERED RADIATORS AND PIPES, AND BENCHES WHICH ARE FIXED TO THE FLOOR. THE SHOWER ROOM SHOULD BE ADJACENT TO THE LOCKER ROOM. THE OUTDOOR PLAY AREAS SHOULD BE PROPORTIONATE TO SCHOOL ENROLLMENT. THE REPORT RECOMMENDS AMPLE SPACE BE PROVIDED FOR GAME AREAS. INDOOR AND OUTDOOR LISTS OF EQUIPMENT ARE INCLUDED AS WELL AS A SELECTED BIBLIOGRAPHY. (6M)

Order from EDRS as: ED 21396

MF \$0.25

HC \$0.56

PHYSICAL EDUCATION (SECONDARY SCHOOLS FACILITIES AND BASIC EQUIPMENT, 1966)

MASSACHUSETTS SCHOOL BUILDINGS ASSISTANCE COMMISSION, BOSTON

019 PAGES

DESCRIPTORS- *EQUIPMENT, *HIGH SCHOOLS, *RECREATIONAL FACILITIES, *SCHOOL PLANNING, *SECONDARY SCHOOLS, ATHLETIC ACTIVITIES, ATHLETIC PROGRAMS, EQUIPMENT STORAGE, EXTRAMURAL ATHLETIC PROGRAMS, GYMNASIUMS, INTRAMURAL ATHLETIC PROGRAMS, JUNIOR HIGH SCHOOLS PHYSICAL EDUCATION, PHYSICAL EDUCATION FACILITIES, SCHOOL DESIGN, SENIOR HIGH SCHOOLS

JUNIOR AND SENIOR HIGH SCHOOL GYMNASIUMS SHOULD BE LOCATED AWAY FROM CLASSROOMS AND NEAR OUTDOOR PLAY AREAS. JUNIOR HIGH SCHOOL GYMNASIUMS SHOULD BE A MINIMUM OF 84' X 98' X 22'. SENIOR HIGH GYMNASIUMS SHOULD BE AT LEAST 90' X 106' X 24'. AREAS SHOULD BE DIVISIBLE. PROVISION SHOULD BE MADE FOR BASKETBALL, VOLLEYBALL, BADMINTON, PADDLE TENNIS, SEATING, AND TEACHING AREAS. OTHER INDOOR AREAS RECOMMENDED ARE SPACE FOR GYMNASTICS, REMEDIAL WORK, HEALTH, AND WRESTLING, AND A SIMULATED OUTDOOR AREA. SPECIAL ATTENTION SHOULD BE GIVEN TO THE FLOOR, WALLS, CEILING, PARTITIONS, LIGHTING, LOCKER, SHOWER, DRYING, TOWEL, TEAM, TRAINING, AND STORAGE ROOMS AND OFFICES. OUTDOOR FACILITIES SHOULD PROVIDE 20 ACRES PLUS AN ADDITIONAL ACRE PER 100 PUPILS FOR JUNIOR HIGH PUPILS AND SENIOR HIGH PUPILS SHOULD HAVE A SITE OF 30 ACRES PLUS ONE ACRE PER 100 PUPILS. HARDTOP AREAS, TENNIS COURTS, AND GRASSY AREAS SHOULD BE INCLUDED. PROVISIONS SHOULD BE MADE FOR INTERSCHOLASTIC SPORTS. OUTDOOR AND INDOOR EQUIPMENT LISTS AS WELL AS A BIBLIOGRAPHY ARE PROVIDED. (RH)

Order from EDRS as: ED 21397

MF \$0.25

HC \$0.84

A STUDY OF THE PRESENT STATUS, FUTURE NEEDS AND RECOMMENDED STANDARDS REGARDING SPACE USED FOR HEALTH, PHYSICAL EDUCATION, PHYSICAL RECREATION AND ATHLETICS

**BY- SAPORA, A. V.
ILLINOIS UNIVERSITY, URBANA-CHAMPAIGN, COLLEGE OF PHYSICAL
EDUCATION BUILDINGS AND FIELDS COMMITTEE**

PUBLISHED-MAY60

452 PAGES

DESCRIPTORS- *ATHLETIC PROGRAMS, *FACILITY GUIDELINES, *FACILITY UTILIZATION RESEARCH, *PHYSICAL EDUCATION, *HIGHER EDUCATION, FACILITY INVENTORY, ATHLETIC FIELDS, GYMNASIUMS, HEALTH FACILITIES, RECREATIONAL FACILITIES

A STUDY OF THE PRESENT STATUS, FUTURE NEEDS AND RECOMMENDED STANDARDS REGARDING SPACE USED FOR HEALTH, PHYSICAL EDUCATION, PHYSICAL RECREATION AND ATHLETICS. THIS STUDY WAS CARRIED OUT AT THE UNIVERSITY OF ILLINOIS TO ASCERTAIN THE PRESENT STATUS AND FUTURE PHYSICAL FACILITY STATE OF THE COLLEGE OF PHYSICAL EDUCATION AND THE ATHLETIC ASSOCIATION ON THE URBANA-CHAMPAIGN CAMPUS. THE REPORT WAS PREPARED IN FOUR STEPS--(1) A STATEMENT DESCRIBING THE SCOPE, PRINCIPLES, AND EDUCATIONAL OBJECTIVES OF THE UNITS INVOLVED, (2) SURVEYING THE EXISTING PHYSICAL ACTIVITY PLAY SPACE AND RELATED FACILITIES, MEASURING SPACE AND OBTAINING ACCURATE SUMMARIES OF AMOUNTS AND LOCATIONS OF SPACE AT URBANA AND THE OTHER BIG TEN UNIVERSITIES, (3) CLASSIFYING VARIOUS TYPES OF SPACE, AND (4) DEVELOPING RECOMMENDATIONS REGARDING PRESENT AND FUTURE SPACE NEEDS. COMPLETED TALLY FORMS AND DATA SHEETS ARE GIVEN FOR ANY UNIT RELATED TO INDOOR OR OUTDOOR PHYSICAL EDUCATION. (HH)

Availability:

**University of Illinois
College of Physical Education
Urbana, Illinois 61801**

RECREATION AREAS AND FACILITIES

PROBLEMS OF RECREATIONAL FACILITIES

BY- SNAPP, E. A.

**HOUSTON UNIVERSITY, HOUSTON, TEXAS, DEPARTMENT OF ADMINISTRATION
AND SUPERVISION**

PUBLISHED- 61

**IN- PROCEEDINGS, SCHOOL FACILITIES CONFERENCE, HOUSTON, TEXAS,
MARCH 29, 1961**

3 PAGES

**DESCRIPTORS- *PHYSICAL EDUCATION, *PHYSICAL EDUCATIONAL
FACILITIES, *RECREATIONAL ACTIVITIES, *RECREATIONAL FACILITIES,
*RECREATIONAL PROGRAMS, AUDITORIUMS, GYMNASIUMS**

**ADEQUATE RECREATIONAL FACILITIES SHOULD BE CAREFULLY PLANNED
AND PROGRAMMED BY SCHOOL ADMINISTRATORS AND EMPHASIS SHOULD BE
PLACED ON INTRAMURAL RATHER THAN INTERSCHOLASTIC PROGRAMS.
COMMUNITY SWIMMING POOLS, BOWLING ALLEYS, AND GOLF COURSES SHOULD
BE MADE AVAILABLE FOR USE BY SCHOOLS. AN INCREASED EMPHASIS
SHOULD BE PLACED ON PARTICIPATION SPORTS RATHER THAN SPECTATOR
SPORTS AND THE REQUIRED FACILITIES SHOULD BE MADE AVAILABLE.
PROPERLY BUILT AND EQUIPPED FACILITIES SHOULD BE PROVIDED SO THE
STUDENTS IN LATER LIFE WILL BE INCLINED TO ENGAGE IN HEALTHFUL,
BODY-BUILDING ACTIVITIES. REHABILITATION OF EXISTING FACILITIES
TO MEET FUTURE PROGRAMS IN PHYSICAL EDUCATION IS DIFFICULT AND
COSTLY-HOWEVER, COLOR IS ONE ELEMENT THAT, CAREFULLY USED, CAN
PUT NEW LIFE IN OLD BUILDINGS. MULTIPLE USE OF SPACE IS ALSO AN
AREA OF MAJOR CONCERN. COMBINATION AUDITORIUM-GYMNASIUMS ARE
DISCUSSED WITH A SUGGESTION THAT THE OLD AUDITORIUM-GYMNASIUM BE
CONVERTED INTO AN AUDITORIUM RATHER THAN A GYMNASIUM. (RH)**

Availability:

**Houston University
Dept. of Administration & Supervision
Houston, Texas 77005**

**OPEN SPACE AND RECREATION PLANNING 45TH ANNUAL SCHOOL
ADMINISTRATORS CONFERENCE**

**BY- WILSON, WAYNE H.
PENNSYLVANIA SCHOOL STUDY COUNCIL, UNIVERSITY PARK**

PUBLISHED-DEC67

REPORT/SERIES NO.- BULL.-VOL-1, NO.-4

OC5 PAGES

**DESCRIPTORS- *CONSERVATION EDUCATION, *RECREATION, *RECREATIONAL
FACILITIES, *SCHOOL SPACE, COMMUNITY RECREATION LEGISLATION,
ENVIRONMENT, ENVIRONMENTAL INFLUENCES, LAND USE, LOCAL RECREATION
LEGISLATION, SCHOOL LOCATION**

**NEW AND INCREASING NUMBERS OF DEMANDS FOR OPEN SPACE AREAS
FOR RECREATIONAL PURPOSES ARE BECOMING INCREASINGLY ESSENTIAL FOR
OUR HEALTH AND PLEASURE. PRESENTLY THERE IS A SERIOUS NEED FOR A
BALANCE BETWEEN PRIVATE RESIDENTIAL DEMANDS AND PUBLIC
REQUIREMENTS. SCHOOL ADMINISTRATORS SHOULD EVALUATE PLANTS IN
THEIR SCHOOL DISTRICTS TO DETERMINE WHAT CONTRIBUTION THEY CAN
MAKE TO THE PRESERVATION AND CREATION OF BEAUTY SPACES. ALSO,
PUBLIC EDUCATION MAY BE A MEANS FOR INSTILLING A KEEN AWARENESS OF
PUBLIC RESPONSIBILITY IN THIS MATTER.**

Availability:

**Pennsylvania State University
College of Education
University Park, Pennsylvania 16802**

WILLIAMS SCHOOL-CITY RECREATION AND PARK SERVICES (AN APPRAISAL WITH RECOMMENDATIONS)

**BY- CONRAD, C. CARSON AND KLUMB, JOHN J.
CALIFORNIA STATE DEPARTMENT OF EDUCATION, SACRAMENTO, BUREAU OF
HEALTH, EDUCATION, PHYSICAL EDUCATION, AND RECREATION**

PUBLISHED- 68

026 PAGES

**DESCRIPTORS- *HEALTH EDUCATION, *PHYSICAL EDUCATION FACILITIES,
*RECREATION, *STATE RECREATION LEGISLATION, *SCHOOL COMMUNITY
CCOPERATION, COMMUNITY RESOURCES, PARKS, PHYSICAL EDUCATION
FACILITIES, PLAYGROUND, RECREATION FINANCES, RECREATIONAL
FACILITIES, RECREATION PROGRAMS**

**A STUDY OF RECREATION NEEDS FOR A CALIFORNIA COMMUNITY
PREPARED BY THE BUREAU OF HEALTH EDUCATION, PHYSICAL EDUCATION
AND RECREATION OF THE STATE DEPARTMENT OF EDUCATION. SPECIFIC
FINDINGS AND RECOMMENDATIONS ARE TIED TO FIVE CATEGORIES WHICH
CCNSTITUTE THE BASIS FOR COMMUNITY RECREATION SERVICES,
ORGANIZATION AND ADMINISTRATION, FACILITIES, PROGRAM, PERSONNEL,
AND FINANCES. APPENDICES INCLUDE A CHECKLIST FOR RECREATION
ACTIVITIES, AND LAWS RELATING TO SCHOOL AND CITY RECREATION, AND
PARKS. (FPU)**

Availability:

**California State Dept. of Education
Bureau of Health Ed., P.E., & Recreation
Sacramento, California 95814**

DESIGNING THE SCHOOL PLANT AS A COMMUNITY CENTER

STATE UNIVERSITY OF NEW YORK, ALBANY

**PUBLISHED- 60
IN- 1 135R-AP-60-3500(45301)**

013 PAGES

**DESCRIPTORS- *COMMUNITY EDUCATION, *COMMUNITY SERVICES,
*EDUCATIONAL FACILITIES, *SCHOOL DESIGN, *SCHOOL COMMUNITY
COOPERATION, COMMUNITY RECREATION PROGRAMS, COMMUNITY SCHOOLS,
ADULT EDUCATION, BUILDING DESIGN, CULTURAL CENTERS, SOCIAL
RECREATION PROGRAMS, RECREATIONAL FACILITIES**

**SCHOOL PLANT PLANNING SHOULD PROVIDE FOR EDUCATIONAL,
SOCIAL, CIVIC, RECREATIONAL, AND CULTURAL NEEDS OF THE ENTIRE
COMMUNITY. FACTORS TO RECEIVE SPECIAL CONSIDERATION IN PLANNING
ARE LOCATION OF FACILITIES, HEAT DISTRIBUTION, STORAGE SPACE,
SPECIAL APPOINTMENTS AND SERVICE FEATURES, AND PROVISIONS FOR
TOILET FACILITIES AND STORAGE OF OUTSIDE WRAPS.**

Availability:

**State Education Department
Division of School Buildings & Grounds
Albany, New York 12224**

SCHOOLS CAN BE GREEN ISLANDS

BY- WILSON, RUSSELL E. AND BROWN, JUNE S.

IN- MICHIGAN EDUCATION JOURNAL, APRIL 1965

004 PAGES

DESCRIPTORS- *CONSERVATION EDUCATION, *LAND USE, *SCHOOL COMMUNITY COOPERATION, *SITE DEVELOPMENT, *STATE FEDERAL AID, COMMUNITY RESOURCES, ELEMENTARY SCHOOLS, NATURAL RESOURCES, RECREATION, SCHOOL FUNDS

SITE DEVELOPMENT IS APPROACHED FROM A NON TRADITIONAL VIEW. UTILIZATION OF THE NATURAL RESOURCES OF THE SITE LOCATION FOR INSTRUCTIONAL PROGRAMS, BROAD COMMUNITY USE, AND INCREASED NEIGHBORHOOD VALUES ARE DISCUSSED. OPPORTUNITIES FOR ENHANCED INSTRUCTIONAL PROGRAMS INCLUDE CONSERVATION EDUCATION, BOTANY, FORESTRY AND GEOLOGY. PLANNING SUGGESTIONS AND A CHECKLIST OF FEDERAL, STATE AND PRIVATE FUNDING AND ASSISTANCE SOURCES IN ACQUIRING AND DEVELOPING SCHOOL SITES IS PROVIDED. THE SCHOOL SITE IS VIEWED AS A LONG TERM PUBLIC RESOURCE INVESTMENT AND RECREATIONALLY DEVELOPED SCHOOL SITES OF AT LEAST 15 ACRES ARE RECOMMENDED AS THE MOST ECONOMICAL INVESTMENTS IN THE LONG RUN. (FO)

Availability:

**Michigan Education Assn.
Box 673
Lansing, Michigan 48903**

**CREATIVE PLANNING OF PARKS AND PLAY AREAS FOR LEARNING, LIVING,
AND LEISURE**

**BY- SCHNEIDER, RAYMOND C. AND BOYCE, R. DUDLEY AND PETERSON, TED
T.**

STANFORD UNIVERSITY, CALIFORNIA, SCHOOL PLANNING LABORATORY

PUBLISHED-DEC57

075 PAGES

**DESCRIPTORS- *MAINTENANCE, *PLANNING, *RECREATIONAL ACTIVITIES,
*RECREATIONAL FACILITIES, *RECREATIONAL PROGRAMS, COOPERATIVE
PLANNING**

**THIS DOCUMENT IS A COLLECTION OF REPORTS ON DEVELOPING PARKS
AND PLAY AREAS. UNDER THE GENERAL HEADING OF COOPERATIVE PLANNING
FOR CREATIVE LEARNING, LIVING AND LEISURE ARE REPORTS ON SCHOOL
AND COMMUNITY FACILITIES, TEAMWORK, MASTER PLANNING, RECREATION
AND PARK DEVELOPMENTS FOR URBAN AREAS, MIDDLE-RIGID CITY
RECREATIONAL PLANNING AND RURAL COMMUNITY COORDINATION OF LEISURE
TIME AND RECREATION. THE SECOND MAJOR DIVISION OF THE DOCUMENT IS
DESIGN FOR LEARNING, LIVING AND LEISURE. IN THIS AREA ARE
REPORTS ON DESIGN FOR USE OF LEISURE TIME, IMAGINATIVE PLAY
EXPERIENCE, AND ACCIDENT PREVENTION AND MAINTENANCE. BALANCING
QUALITY AND ECONOMY IN SCHOOLHOUSE PLANNING IN THE FINAL MAJOR
AREA INCLUDED IN THE STUDY. THIS SECTION CONTAINS REPORTS ON THE
SELECTION OF RESILIENT FLOOR MATERIALS, TILE AND ITS USES, YEAR
ROUND AIR CONDITIONING AND A MASTER PLAN FOR CLARK COUNTY, NEVADA
SCHOOLS.**

Availability:

**School Planning Laboratory
Stanford University
Stanford, California 94305**

THE PARK-SCHOOL PLAN-ITS PLANNING AND MAINTENANCE

**BY- EVERLY, ROBERT E.
ASSOCIATION OF SCHOOL BUSINESS OFFICIALS EVANSTON ILLINOIS**

**PUBLISHED-OCT55
IN- PROCEEDINGS ASSOCIATION OF SCHOOL BUSINESS OFFICIALS OF THE
UNITED STATES AND CANADA 41ST CONVENTION CHICAGO, ILLINOIS OCT
16-20 1955**

004 PAGES

**DESCRIPTORS- *CAMPUS PLANNING, *BUILDING DESIGN, *FACILITY
UTILIZATION RESEARCH, *RECREATIONAL FACILITIES**

**A DESCRIPTION IS PRESENTED OF THE PLANNING AND MAINTENANCE OF
OF PARK-SCHOOLS -- SCHOOL FACILITIES UTILIZED FOR RECREATIONAL
PURPOSES. (FS)**

Availability:

**Robert E. Everly
Superintendent of Parks and Recreation
Glencoe Park District
Glencoe, Illinois**

SPECIFICATIONS FOR EDUCATION PLAZA SAULT STE. MARIE, MICHIGAN

OFFICE OF EDUCATION, WASHINGTON, D. C.

REPORT/SERIES NO.- DPSC-67-43-11

213 PAGES

**DESCRIPTORS- *BIOLOGICAL SCIENCES, *EDUCATIONAL COMPLEXES,
*EDUCATIONAL SPECIFICATIONS, *HEALTH SERVICES, *SOCIAL SERVICES,
ADULT EDUCATION, HANDICRAFTS, RECREATIONAL FACILITIES, SOIL
CONSERVATION, VOCATIONAL EDUCATION**

**EDUCATIONAL SPECIFICATIONS ARE PRESENTED FOR AN EDUCATION PLAZA,
WHICH IS INTENDED TO SERVE AS BOTH AN INDOOR AND OUTDOOR RECREATIONAL
FACILITY. (FS)**

Availability:

**United States Office of Education
Washington, D.C.**